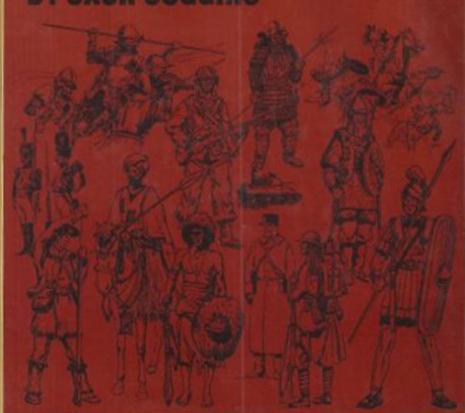
THE FIGHTING MAINISTRATE DISTORY OF the world's great fighting forces through the ages

BY JACK COGGINS



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THE FUNTING MAN

JACK COGGINS

A creprehensive survey of the world's greatest armies and soldiers — from ancient times to Viet Nam.

"The history of this planet," the author says in his Introduction, "has been one of blood, and all our so-called civilization has produced only bloodier and more devastating conflicts." Throughout the ages, one tribe after another, one nation after another, has taken up the sword, either to defend itself or to extend its political influence.

THE FIGHTING MAN is a full-scale examination of war as it has been fought through the ages by its most fundamental unit - the soldier. It is a studied evaluation of the practical means by which certain soldiers have obtained advantages over their enemies. Beginning with the ancient Egyptians, Assyrians, and Persians, the author describes in detail the precise nature of the warrior; his basic weapons; the quality of his leaders; and the exact historical circumstances which led to the creation of the greatest fighting forces: the Greeks, Mongols, the Romans, the November the Vikings.

(Continuent on March flap)



355.1 Coggins
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THE FIGHTING MAN



THE FIGHTING MAN

AN ILLUSTRATED HISTORY OF THE WORLD'S GREATEST FIGHTING FORCES THROUGH THE AGES

By JACK COGGINS

ILLUSTRATED BY THE AUTHOR



DOUBLEDAY & COMPANY, INC., GARDEN CITY, NEW YORK

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PRINTED IN THE UNITED STATES OF AMERICA

FIRST EDITION

355.1 Coggins

145422

These, in the day when heaven was falling,
The hour when earth's foundations fled,
Followed their mercenary calling
And took their wages and are dead.

Their shoulders held the sky suspended;
They stood, and earth's foundations stay;
What God abandoned, these defended,
And saved the sum of things for pay.

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INTRODUCTION

In ancient Rome, there stood a temple dedicated to the god Janus. Traditionally the temple doors stood open in time of war. History tells us that from the time of its building, about the beginning of the seventh century B.C., to the beginning of the Christian Era, the temple gates were closed but four times. If from the dawn of history some super-historian could have recorded the opening and closing of a universal temple of the two-faced god, one wonders for how many hours in the last 6000 years those gates would have been shut.

The history of this planet has been one of blood, and our modern civilization has produced only bloodier and more devastating conflicts. Some of the greatest military men have deplored war: statesmen and religious leaders have denounced it: today — most people dread it. Yet, mankind being what it is, wars we still have and are likely to have for many generations to come.

Why? Because, besides various animal characteristics, ferocity, greed, and the like, inherited from our primitive ancestors, we are conditioned to it from childhood. Our history books (chauvinistic to the extreme for the most part), our patriotic songs, our national heroes, our folklore and literature are all calculated to plant in the young mind the seed from which will ultimately spring the warrior fully armed. The fact that modern warfare is inconceivably more deadly in character than anything we have dreamed of before hinders us not one whit.

War is said to be only the extension of world politics. We are evidently so hardened to the blunderings of our so-called statesmen and the mouthings of our politicians that we have seemingly accepted the fact that a war, in which millions of men, women, and children will be incinerated and untold numbers horribly burned and maimed, is inevitable.

For, like it or not, war is a universal tradition. It calls for the ultimate in effort, both individual and national, which a people can put forth. Beside it all struggles against nature, all attempts to transform a

land or reshape a society pall into insignificance. To use an overworked phrase, it is, for both the private citizen and the state, the moment of truth.

It will become apparent to the reader that I have the greatest respect for the world's fighting men, both officer and enlisted. In the last analysis, it has been on their shoulders that the ultimate decisions in history have rested; and theirs has been the greatest often the ultimate - sacrifice. This respect does not include, however, the mental attitude of those directly or indirectly, responsible for military action. In recent decades it has become fashionable to put the blame for such actions on the politicians - forgetting that the politicians are but a reflection of the thoughts and wishes of the electorate. This also holds true in those countries where the word "electorate" is at best a joke, if not downright treason. For even the most ruthless and efficient of police states cannot exist contrary to the tacit approval or, at most, indifference, of the vast majority of the population.

Nationalism, racism, demand for economic superiority, and to a lesser extent, religion, all play their part in laying the pyre on which one day the civilizations of our world, as we know them today, will perish. Will perish, that is unless in the next few years vast strides are made in the direction of mass education in the necessity for international, and ultimately supranational, collaboration on all major problems.

That such a program will meet massive resistance in many quarters is a foregone conclusion. It is ironic that an age, in which almost unbelievable technical achievements hold out so much promise for the ultimate welfare and betterment of mankind as a whole, may well see mankind's destruction. It is disastrous that the scientific accomplishments of the last few decades have so far outrun the mental capacity of the mass of the people, who cannot begin to understand the implications of the forces which their engineers and scientists have let loose. For, unpalatable as the fact may be, the unpleasant truth is that the vast

majority of the citizens of all nations are so lacking in intelligence, that the comprehension of even the simplest of the world's problems are completely beyond them. They are, almost without exception, wrapped up in their own personal or local problems—admittedly often very pressing ones; bound from earliest childhood by age-old prejudices and hatreds; and with thought processes—such as they are—rigidly and inflexibly set in the patterns ordained by their particular race, creed, geographic location, and economic and social state.

Unfortunately, even the possession of what is today considered a superior education is not always the criterion of a thinking, rational human being, and there is a vast difference between cleverness and intelligence. The young seem to absorb bigotry and prejudice along with their mother's milk. By the time they have skimmed through their preparatory schooling they have usually picked up their parent's likes and dislikes, "isms" and phobias. The temples of higher learning are themselves not always without their ill-effects, and a young man can be brainwashed as effectively at Harvard as at Leningrad.

Ignorance begets more ignorance. Stupid people choose stupid leaders, or are duped into following men, or groups of men, who manipulate them for their own ends. Exactly where this frightening chain of events will eventually lead is impossible to foresee. At the moment the nations - armed as never before, are truculently eying one another over their respective "curtains." The efforts of a few internationally minded men will be powerless to save the world's peoples unless an entirely new type of thinking can be inculcated in the young people who will (if we are lucky) inherit our increasingly overcrowded planet. If, on the other hand, the nationalists, the "my country firsters," the super-patriots and racial and religious bigots have the ultimate say in the world's affairs - then at no far distant future one more globe will spin through space - uninhabited, and uninhabitable.

Granted then our warlike tradition (with its probable ghastly results), granted also that most nations, being at best a polyglot mixture of assimilated races, are physically very similar. Why then do we find as we read our histories, that some men; soldiers of some particular tribe, city, or nation, have fought better, or more successfully than others? and even more interesting, why better at one time or in one age, than in another?

The troops who followed the pharaoh Thothmes III to the Euphrates were doubtless stout fighters, yet where could you find a less soldierly race than that which inhabits the valley of the Nile today. The much vaunted armies of Mussolini were to have carved out a second and more glorious Roman state. As they surrendered in droves, or fled wildly across the sands of Libya before Wavell's handful, the tough little Italian legionaries who hacked out an empire for ancient Rome must have turned in their far-scattered graves.

What then makes an outstanding fighting man? Not race, because the dreaded soldiery of one century may be the easily routed rabble of the next. Not necessarily hardiness or physique either, although these are attributes of a good soldier. Time and again soldiers of civilized states have defeated hordes of barbarians; more powerful physically, tougher, and sometimes better armed.

Better weapons? Sometimes, but not often. Rarely has one side had a marked superiority in weapons and this has usually been offset by other factors, usually a marked inferiority in numbers. Only once in all history has one nation had the sole possession of a decisive weapon.

Discipline is an essential. Yet on occasion, given sufficiently strong motives, bands of poorly armed and untrained citizens have broken regular troops. Patriotism? That ennobling, much lauded, but often misguided and irrational state of mind (which Samuel Johnson once referred to as the last refuge of a scoundrel) may help; but veteran mercenaries, many of them probably scalawags who had the most pressing reasons for not showing their faces in their own homelands, have often routed more numerous (but less warlike) bodies of patriots.

Religion? Very often a deciding factor, if the theist is also a trained soldier. It is hard to prevail against a fighting man who believes with all his heart that his Redeemer, Prophet, or personal Ju-Ju gives strength to his sword arm and toughness to his shield. Add to this a conviction that death on the field fighting the enemies of his faith ensures instant transportation to a better world and, whether his taste runs to harps or houris, we have an almost unbeatable warrior. But there is more to it than that. "My strength is as the strength of ten," wrote the poet, "because my heart is pure." Yet frequently professional troops, noted neither for purity nor piety, have sent the faithful flying. Those who have relied on high-mindedness and sanctity of purpose to the exclusion of all else have always been rudely awakened. The forces of evil (invariably better armed) usually conquer - and it can be guaranteed that all the meek will ever inherit is a burial ditch or the chains of slavery.

But we are getting nearer the truth. When we

speak of religion we must also include belief, not only in a deity or deities, but also in an economic system, or a way of life. And along with the conviction that one system of government or of economics is superior to another, men may also be convinced that one tribe, nation or race is superior to any other. This falls under the heading of patriotism, which influences professional soldiers to some degree, but mercenaries not at all. In any case, it is hard to define and dimly felt, if at all.

Far more important is the belief that one company, legion, or corps is superior to any other. This esprit de corps, regimental honor, military spirit, call it what you will, is something which can be sensed by any body of men. This inner fire, once lit, must be patiently fed over the years: on scraps of regimental history; past glory and present achievement; comradeship; and trust in the professional ability and integrity of the leader in front and the rear-rank man behind. Properly tended by skilled and devoted men, it burns and smolders in the hearts of the unit. At the crucial moment, fanned by the waving of standards; blasts of brazen trumpets; the shrillings of a platoon sergeant's whistle; or the quiet command of a trusted leader, it can burst into a bright flame which will fire ordinary men to storm the gates of hell itself. Small wonder that the hard-bitten mercenaries who made up the legions of Imperial Rome worshiped their eagles. For though they might pay lip service to a hundred gods, to them the golden birds embodied the very soul of their organization; the spirit of their corps translated into physical symbols.

This, then, is the secret; an intangible spirit which welds a unit together into a close knit society, assured in its sense of superiority, of invincibility. Take a man imbued with such a spirit; endow him with the necessary physical and mental toughness; add a sizable dash of native intelligence, and arm and equip him sensibly: discipline him and officer him well and you have the ideal soldier. In my opinion it is not necessary to coddle such a man, nor to indoctrinate him against this or that "ism." Enough for him that he is ordered to do something, without a lot of explanation. Time spent listening to lectures on "why we are fighting" could be put to better use on the rifle range. By this I do not mean that the ideal fighting man is stolid, unthinking, unimaginative: a mere military robot. War, and especially modern war, is too complicated an affair for that. But the thinking should be confined to those things which pertain to his profession. It is for the planners of the high command to worry about the international or political effects of such and such a move.

It has become the fashion in recent years to ridicule the lines "Theirs not to reason why . . . " To me this is dangerous thinking. It reflects a trend in civilian writing, which, as our armies today are for the greater part civilian armies, can only have unfortunate results. To suggest that the troopers of the 17th Lancers or the 13th Light Dragoons should have asked the "reason why" is to strike a blow at the very heart of all that makes a soldier. In a sense any advance is a charge into the Valley of Death. Too often someone has blundered, but that the rank and file are to be encouraged to stop and consider the pros and cons of the situation is unthinkable. As for the gallant six hundred - though they could have used some supports, they would have scorned pity. They were professionals.

Since the carliest recorded times every tribe, state, and nation has spent much of its existence in a state of war. To pick certain notable armies or units from the battle-filled pages of history is a difficult task. Yet in every age there is at least one such force or organization - mercenary or patriot, professional or volunteer - which to me stands out above the rest. My choices will be questioned, and certainly many splendid corps and glorious achievements have gone unnoticed, for the folklore of every nation is filled with examples of heroism or self-sacrifice. But this is not a book of hero-tales, nor for the most part, can our sympathics be with the men of the armies or organizations under discussion. The old Roman military virtues did not include kindness and mercy. Not without reason did women and children join priest and nun in prayer for deliverance from the fury of the Northmen: and the deeds of the splendid Spanish infantry in the Netherlands shocked even that hardened age.

Remember though, that the conduct of the common soldier of those days was only a reflection of the brutal times in which he lived. If he gave short shrift to his victims, he could look for little mercy himself. If wounded or taken prisoner he stood a good chance of being knocked on the head or having his throat cut. Nobles or officers might have some value for ransome or exchange, the man in the ranks had none. If he fell into the hands of the peasantry, even if he himself had committed no excesses, his end was not only certain but probably painful.

From the fall of the Roman Empire until comparatively modern times no system existed for the pensioning or care of old or disabled veterans. If he could acquire enough loot while he was young and healthy to provide for his old age, so much the better. Few did, and fewer still prudently saved their gains. The rest swelled the ranks of the beggars, exhibiting their wounds in the hope of receiving a few coppers.

In the more enlightened eighteenth century both the status and the conduct of the soldier underwent a change for the better, at least in Western Europe. The awakening of some glimmering of conscience among the newly born (and increasingly vocal) class of liberal intelligentsia deplored, if it could not prevent, the excesses of the military. The end of the next century saw war not only romanticized by poet and press, but conducted, in so far as the civilian populations were involved, with a politeness and general air of courtesy and refinement never attained before or since. Wars were for the most part carried out in a genteel way, so to speak. Almost universal government schooling had set its stamp on the lower classes. The "brutal and licentious soldiery" now had the benefit of at least a smattering of education, and the advantage of being officered by the very best people.

This is not to say that the innocent civilian was never shot, raped, ruined, imprisoned, or otherwise discommoded. It was merely that these unfortunate incidents occurred on what seems to us a ridiculously small scale. In his wildest dreams no Victorian soldier could have foreseen that one day clean-cut young Englishmen, many of them erstwhile wearers of the old school tie, would systematically set fire to a great city, methodically stoking the blaze over a period of days until the number of civilian dead reached the tens of thousands. And who would ever suspect those polite little Japanese (who behaved so correctly to their Russian captives in Korea and Manchuria) of a Nanking or a Death March. Happy age! Hamburg still stood—as did the library of Louvain, Coventry

Cathedral and some hundreds of thousands of schools, museums, churches, hospitals, and homes which the following half-century would see bombed to rubble.

The Napoleonic Wars and the Civil War in America foreshadowed the coming of the great civilian armies of the twentieth century. The reappearance then of the citizen-soldier on the battlefield coincided with the unleashing of a host of new and deadly weapons. The war effort now employs the entire ablebodied population and the word civilian loses its meaning. A young mother working in a munitions factory becomes as deadly an enemy—and as legitimate a prey—as any front-line soldier. This extension of the battlefield to include the hostile territory in its entirety engenders mass hatreds which have gone far to restoring to war all its old savagery.

Today the scientist has invaded the battlefield, ushering in the so-called push-button era, and the whole world constantly teeters on the brink of thermonuclear war. The weaponry of the contemporary armies now includes a bewildering array of gadgets - so complex that a large degree of specialization is necessary. Yet despite all the fancy hardware - semiautomatic or demanding sizable crews of soldier-scientists - the brunt of tomorrow's war will fall where it always has, on the combat infantryman. He is better trained and better equipped than ever before. He has at his disposal fire-power unbelievable a few years ago. But, whatever his nationality, color, religions, or economic beliefs, without the vital spark his weapons alone will not give him the victory. That will go to the armies whose men best combine skill and discipline with the inner knowledge that their comrades, their regiment, their officers, their corps is the finest in the world.



THE ANCIENT WORLD

on the most part the fighting men of the ancient world did their duty unrecorded. Tribes triumphed and kings conquered, leaving behind a few tumbled ruins and some potsherds. But as the recorded history of the Middle East emerges from the sand and debris which have covered it for thousands of years we can follow, in a general way, the rise and fall of city-states and empires. Brushed on papyrus, painted or carved on tomb and temple, or inscribed in tablets of clay are tales of invasions, sieges, victories, and disasters. These records, the often boastful testaments of the captains and the kings, give little space to the man in the ranks. Some of the ancients, however, the Egyptians and Assyrians in particular, have given us in their pictures and carvings a good idea of what the common soldier of their day wore, and how he was equipped. Of how he was organized and led, we know almost nothing.

Well-publicized as were the armies of Rome, there are still many gaps in our knowledge of the legions and their structure. And the coming of the Barbarians and the breakup of the Western Empire leaves us with a long period in which we must rely largely on conjecture.

Out of the welter of conflicts, partially recorded or barely glimpsed, which make up the martial traditions of the peoples of the dawn of history, one over-all pattern occurs again and again. This is the constant pressure brought to bear on settled, and therefore agricultural peoples, by others from lands less desirable from the standpoint of climate or fertility, and whose way of life was therefore harder.

These lean and hungry men, the familiar "Barbarians from the North" were nomads for the most part, herdsmen, and hunters, kept at a constant fighting pitch by battles with neighboring tribes over pasture lands and hunting grounds. To these hardy souls, the less warlike folk of the settled lands, the farmers and town dwellers, on the fringes of whose civilization they dwelt, appeared as natural prey, furnishing food,

weapons, and other plunder. The border forays they made were a constant threat to outlying settlements but, as the people of the settled lands almost always outnumbered the marauders, they were only raids, and nothing more. The very independence and freedom of the wandering tribesmen kept them forever at each other's throats, divided by clan warfare and tribal blood feuds, and so always more of a nuisance than a danger to their more civilized neighbors. But woe betide the industrious plainsmen when some nomad leader arose powerful enough, first to unite his own clansmen and then to gather the tribes together in some sort of confederation. Then, no longer a raiding party but an army, they would pour over the frontiers, overwhelm the garrisons of the border towns, and sweep down on the unarmed villagers of the cultivated plains. If they succeeded in defeating the hastily summoned armies of the kingdom, then, the initial period of massacre, rape, and wholesale plundering over, the conquerors would settle down to enjoy the fruits of victory, served by the remnants of the population. The survivors of the working classes would, in many cases, be but little worse off than they were before, their normal lot being usually far from a happy one, and an invasion, except for the accompanying bloodshed, bringing a mere change of oppressors.

The conquerors would, in due course of time, absorb many of the refinements of civilization, intermarry, and settle down into solid citizens and property owners. Then, enervated by the milder climate and softened by the joys of easier living, they too would fall victim to still other invaders, leaner, hun-

grier, and hardier than themselves.

Seldom did superiority in weaponry have any decisive result, although in the opening centuries of our Christian Era, a revolutionary development in horse equipment was to have profound effect on the future of the Western World. In fact in the majority of cases the invader was not so well armed and equipped as were the forces of civilization. It was not the lack of weapons which brought the townsmen and the husbandmen to disaster. It was their lack of the offensive spirit, and the reckless aggressiveness of the dwellers of desert, steppe, or mountain. Physical strength, of much importance in the days of hand-to-hand combat, entered into the equation, and may in some cases have been a deciding factor. It must be remembered, however, that in most cases the soldiery of the civilized state was drawn from the agricultural class, which all through history has been a dependable source of sturdy recruits, inured from birth to a life of hardship and privation.

In the days of short campaigns, those states which could rely on the enlistment of hardy citizen-soldiers were in an advantageous position, even when facing barbarians. Any small edge the invader might have in physique and savagery was usually more than balanced by the superior morale (of citizens fighting for their homes, families, and country); discipline; and armament of the more civilized forces.

It must also be remembered that, while of necessity more warlike than his (slightly) more civilized opponent, the invaders were not necessarily bands of picked fighting men, but were often whole tribes and even nations on the march, hampered by the aged, the women, and children, and such of their worldly goods as could be carried, or stowed into wagons. Where the barbarians often ultimately prevailed it was by sheer weight of numbers pressing against a frontier usually only loosely held by far-flung garrison outposts and settled in numbers insufficient to insure adequate support.

Certainly the economic and social position of the common people had in almost all cases a great effect on their capabilities as warriors. This was true throughout the ancient world (and is in some degree true today). As long as a large percentage of the total population consisted of semi-independent and reasonably prosperous farmers; with a stake in the community, large families, and hope for the future, then the state was assured of a steady supply of the finest soldier material. The decline of such states can, in most cases, be directly linked to the debasement of the peasantry into some form of serfdom. When this occurred (and it usually did, either due to some form of feudalism or to the inevitable results of the slave-capitalist system as practiced in much of the ancient world) then the state had to recourse to the hiring of mercenaries, often of foreign origin.

Professional soldiers such as these, while usually better fighting men — as any professional is inevitably superior to an amateur — had little, if any, attachment to the city or state which employed them. Frequently, as the citizens became less and less accustomed to bearing arms, the by now indispensable mercenaries would make increasing demands; for more pay and greater privileges. In time, as their power increased, and the blackmailing of their employers failed to satisfy their exactions, they overthrew those who had hired them, and set themselves up in their place. Thus the state who had recourse to mercenary troops had constantly to be on the alert against destruction by the very forces which had been employed to protect it.

Often, as was the case with Rome in the declining

years of the Empire, the barbarians, who lay on the marches of the outer provinces, were themselves hired; to make war on their own or neighboring peoples, and in many cases, to be finally absorbed into the nation as citizens.

It may be well at this point to explain more fully the use of the word "barbarian," which crops up so frequently in all ancient histories, and will often be mentioned here. The word is of Greek origin, and is generally supposed to be an onomatopoetic rendering of the way foreign talk sounded to the Hellenes. It originally meant any non-Greek, including the Romans, and it was only later that it acquired the meaning, that of an uncouth savage, that it does today. In speaking, then, of a barbarian a Greek might be discussing a foreigner from a civilization and culture equal or superior to his own (though of course, no self-respecting Greek would ever have recognized that such a culture existed - a state of mind which, unfortunately, has come down to us unchanged through the ages). In the sense in which the word is used most frequently in these pages, it refers to those tribes, nations, and races which dwelt on or beyond the fringes of the civilized world, then a little world huddled close to the Mediterranean and the twin rivers.

Lacking, as we do, specific descriptions of the formations of the armies of the early civilizations, we must rely largely on conjecture, based on such meager facts, legends, and bits of history (it is often most difficult to tell which is which) as have come down to us, pieced out with pictorial records. We know, for instance, from paintings on pottery dating from about 3500 B.C. that the chariot was in use by the Sumerians, although no doubt clumsy and slow, with solid wheels, and drawn by asses. It is more than likely that these early chariots, few in number, were used more as a means of transport—carrying a chief or champion to the scene of action—than as an actual weapon. In other words, more like a troop carrier than a tank.

The mass of fighting men moved on foot. These footmen would be variously armed, with swords, axes, spears, bows, and slings. Possibly in the very earliest days there was little or no attempt to separate the warriors according to the weapons carried. Each man undoubtedly armed himself as best he might, and followed his chieftain into battle as part of a disorderly mob, just as the peasantry followed their local lords in the early days of feudalism.

In time – and time moved very slowly in those days – the defects of the armed mob as a tactical unit must have become apparent, and some form of order

established. We may suppose that the bowmen and the slingers were separated from the spear and axemen, the bowmen perhaps to act as skirmishers in front of the main line, while the slingers gathered on the flanks. Defensive armor was an early addition to the fighting man's equipment, and the main body of spearmen would, at a very early date, be protected by helmet and shield. Later on body armor of various types, of bronze, leather, quilted cotton, and, eventually, iron, would be worn.

It is doubtful that in the early days these bodies of heavily armed and armored men moved and fought in any rigid formation. More likely they straggled along in groups, under the urgings of their local subchiefs, and one can imagine that the formation of the battle line was the occasion for much pushing and jostling, the braver or more boastful demanding places in the forefront of the battle. Control of such mobs was almost impossible, and any attempts to move one part of the battle line forward while refusing the other would have been out of the question. Any such maneuver must have resulted in a universal surging forward of the whole line, while a withdrawal of one portion of the formation would in all probability have resulted in a general retreat and probable rout. This inability to control unorganized and undisciplined levies was not confined to the ancient world. A prime example of an occasion where such lack of discipline was the direct cause of the loss of one of history's really decisive battles was the conduct of Harold's levies at Hastings, when, leaving their well-defended positions, they surged downhill after the retreating Normans, with results disastrous to themselves and to Saxon England.

Coupled with the almost insuperable difficulties of controlling large bodies of untrained troops was the fact that the roles of the leaders were more those of champions than of tactical commanders. These paladins rumbled forward in their chariots, protected from the missiles of the archers and slingers by their shield bearers and followed by their men on foot. When they encountered an enemy leader, both heroes would dismount and go at it with spear and sword. Meanwhile the charioteers turned their vehicles around, ready if necessary to beat an instant retreat. The champion, if wounded or hard pressed, jumped into the open back of the low slung car, and was rushed off to safety. The opposing spearmen might close, but in many cases the outcome of the single combats would decide the day, at least in that particular part of the field. Upon the fall of their champion the defeated man's followers would often retreat, first attempting to bring off the body of their leader. These tactics, so

ably described by Homer, were typical of the early days of warfare.

There was often some hesitancy, even among the hero-leaders, to engage an enemy of marked superiority and there was much boasting and shouting of taunts and insults before actual combat was joined. There is a natural reluctance on the part of one body of men to closely engage another, especially when in close formation and armed with sword, spear, and ax. The advance, accompanied by loud shouts for selfencouragement and to daunt the enemy, often halted before coming to push of pike, just as, many hundreds of years later, most bayonet charges in the American Civil War petered out into a fire fight before bayonets were crossed. It usually took some act of courage or bravado on the part of an especially valiant man or group of men to trigger the action. This act of closing with the enemy, this actual "plunging into the fray" of which we read so often, is what has always separated the men from the boys, the veteran from the recruit.

This perfectly normal human reaction to the probable result of exposing shrinking flesh to the sharp points and edges of the enemies' weapons, was as well known to the ancients as to any modern army psychiatrist. Once engaged, excitement, anger, the urge to kill, the knowledge that if the enemy in front are not killed they may well kill him, plus the stimulation and support of stout comrades to right and left, all help the man of average courage to sustain the shock of combat.

The ability to excite his men to fighting pitch was one of the marks of a good commander. Disciplined as were Caesar's veterans, that careful general never failed, when circumstances permitted, to deliver a short harangue to each legion, to rouse their martial ardor to the fighting pitch. It may be remarked, however, that while fierce shouts have always accompanied the actual crossing of weapons the Greeks of the Iliad were expected to make the advance in silence, the better to hear whatever last-minute orders their chiefs might give. It is to be supposed that the poet's words were in the nature of a homily, and represent what good soldiers ought to do, rather than what they actually did. It is difficult to imagine a Homeric army advancing in disciplined silence!

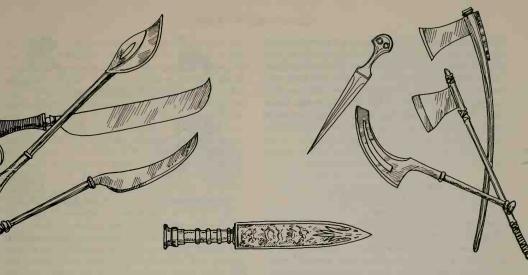
The Egyptians

The Greeks at the time of the Trojan War, or wars (c. 1200 B.C.), were comparatively rough and uncivilized folk, but by the above date the peoples of

Egypt and the Mesopotamian kingdoms had developed the art of warfare to a higher degree than their ruder neighbors to the North and West. The Sumerians, after centuries of inter-city bickering, had at last been united under an empire or empires, only to fall sometime around 2750 B.C. to the Akkadian conqueror, Sargon I. The Akkadian-Sumerian empire was soon beset by the Elamites to the east and the Amorites on the west. These last, who founded or settled in an obscure town on the Euphrates called Babylon, were, under Hammurabi I, to conquer most of the land between the rivers. This brings us down to about 2100 B.C. Small as is the region under discussion, it had already been liberally drenched with blood. And there was more to follow, rivers of it.

The Egyptians occupied a geographical location favorable to the development of their civilization in comparative peace and quiet. Protected by seas and deserts, and open to invasion by the powers of the two rivers only across the narrow isthmus of Suez, her only problems had been the usual growing pains of any civilization. The thrones of Upper and Lower Egypt—represented by the vulture and the cobra in the royal diadem—themselves the absorbers of many little kingdoms, were united under one pharaoh. Men, or Menes, the traditional founder of the first of the





Egyptian swords, axes, and daggers

thirty-one dynasties which were to rule Egypt until the coming of Alexander in 332 B.C., probably reigned about (and it is a big "about") 4000 B.C. His successors and those of the next few dynasties in the period known as the Old Kingdom, consolidated the kingly power, those of the IV, V, and VI dynasties being responsible for most of the pyramids.

Military activities seem to have been on a small scale—the usual actions of border guards against raids by desert nomads. The Ethiopians, living upriver, gave some trouble (they were later to conquer the kingdom and hold it for a time) and a major raid from the direction of Syria is mentioned. From tomb paintings we know a little about the warriors of those early days. The bow was much used in Egypt and there were units of archers and slingers as well as others of heavy infantry. Spearmen carried large shields, which, like those of the Greeks of the Heroic period, covered them from neck to ankle. The horse had not yet made his appearance.

The peaceful days of the pyramid builders ended in civil strife and about 1750 B.C. Egypt was invaded by the Hyksos, the so-called "Shepherd Kings." The origin of these people is in doubt, and by some they are believed to be the Israelites and by others, akin to the Hittites. In any case, they presumably possessed horses and chariots, for when they were ultimately driven out and the XVIII dynasty established about 1600 B.C. (the beginning of what is known as the New Empire) we find the Egyptians equipped with chariots—not the lumbering, solid wheeled type of

the Sumerians, but light vehicles with spoked wheels capable of maneuvering at high speed. The founding of the new dynasty, with its suppression of feudalism and disorder and centralization of power once more in the hands of the pharaoh released a surge of energy and expansion which took the Egyptians under Thothmes (Tuthmosis) I to the Euphrates.

Thothmes III fought the battle of Megiddo, better known as the Armageddon of the Bible, routing the Syrian enemies and their allies, and taking the city. The chariots seem to have played a great part in Egyptian warfare in this period as in fact they did throughout most of the Near East. Their use now is different from their earlier troop-carrier role. They are now high-speed assault vehicles - carrying either an archer-driver, or more efficiently, both a driver and an archer. They were used in large numbers, and may have relied to some extent on shock effect as well as on fire-power. Cavalry was little used at this time (not at all by the Egyptians) and the massed chariot attack was used in place of the charges of bodies of horse. Against any but highly disciplined infantry such attacks would have been most effective. They were undoubtedly checked whenever possible by countercharges, resulting in a mêlée of rushing vehicles, dashing alongside or past each other in a pall of dust, amidst whizzing arrows and flashing javelins.

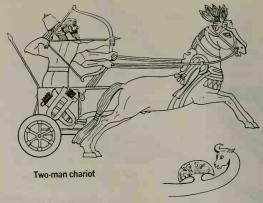
Though sturdy and obedient the Egyptian peasant perhaps lacked the dash of the men of the desert, while neither his economic and social system, nor his religion, were of a sort to inspire any great outburst of patriotism. Mercenary troops had often been employed in the days of the Old and Middle Kingdoms and under the rulers of the New Empire their use increased. A majority seem to have been Libyans, but foreigners from many of the Mediterranean lands were employed, being organized in separate units and with uniform armament—much as were the Roman auxiliaries of a much later date.

The Assyrians

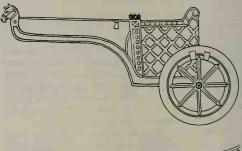
About the time that the Egyptians were making their weight felt abroad, a new nation was taking shape in the fertile country near the headwaters of the Tigris. These people, the Assyrians, were a tough breed, warlike and full of fight. They were mighty hunters, too, and made great sport out of hunting lions which abounded in their land in those days. Of all the peoples of the pre-Roman world these Assyrians stand out as the greatest example of a military state, strongly centralized, with a king who was, at least in most cases, not only a ruler but a competent general, and a well-organized and well-equipped army of tough nationals. They have been called the Prussians of the Middle East and when they went to war, which was often, they displayed a thoroughness in planning and a "frightfulness" in execution which bears out the appellation.

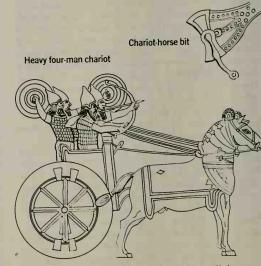
From the boastful inscriptions of their kings and the numerous carvings and reliefs on the walls of their palaces and temples we know quite a lot about the physical appearance and equipment of the Assyrian troops. They were a stocky, muscular people, or at least so they are always depicted – perhaps for propaganda purposes – with big noses, long curly hair, and fierce curly beards. Their arms and equipment varied, and changes can be noticed as time goes

In the early days the chariot was their prime weapon and the chariot men the elite of the army. The Assyrian chariots were of at least two types. One, a light two-man vehicle, carrying an archer and a charioteer; and a heavier car carrying four men, the archer, charioteer, and two shield bearers. In others, there was only one shield bearer to protect the bowman. The smaller vehicle had rather small wheels, while the wheels of the four-man car were substantially larger and heavier. In all the ancient Middle Eastern vehicles the wheels were set far back and



Ornamented end of chariot pole





Assyrian war chariots-from ancient reliefs

much of the weight fell on the pole. The reason for this rather inefficient distribution of weight, which must have hampered the horses to some extent, is unknown. Wheels are represented as having six or eight spokes, with comparatively broad felloes. These felloes, formed of concentric rings of wood, were, in some cases at least, banded with metal, probably iron. There were no springs, and it must have taken considerable skill to have been able to make good practice with the bow, while at the same time maintaining one's balance, even while covering comparatively smooth ground. In fact at times the bowman dismounted, and shot from a firmer footing, while his attendant shield bearer warded off enemy missiles. The shaft itself began at the middle of the axle-tree; ran forward under the body; curved upward to about half body-height; then forward horizontally, until it took an upward curve at the forward end, which usually terminated in some sort of ornament. Two quivers are often shown on the side of the body of the ear, and in many eases, javelins were carried in holders.

The horses (usually two are shown) were yoked one each side of the central shaft. Where three horses were used, the third horse must have been a spare (as with the side horses of the Greeks) attached by a thong and used as a replacement in case of accident or the wounding of one of the regular team. Some reliefs show horses wearing protective horse cloths or barding. This was probably of some heavy material, possibly quilted, and would have been sufficient to stop an arrow shot from any great distance.

The shields carried by the attendants were small and round. All members of the chariot erew usually are shown wearing short sleeveless coats of seale armor - small overlapping plates sewed onto a backing. The archer and his attendants wore short swords, slung by a strap to the left side, also the typical Assyrian helmet, high peaked and with small lappets over the ear. All the peoples of that part of the world seem to have made extensive use of the chariot - the Egyptians, the Hittites, that powerful Indo-European nation which held sway in and around what is now Syria - the Cretans, Myceneans, and the Israelites. Whether the Assyrians made more use of this arm than other nations is not known. Possibly they organized their chariot fighting a little better, as they seem to have done everything else. At any rate, their ehariots come in for special mention in the Bible, Isaiah describing the Assyrians as a nation "Whose horses hoofs should be counted like flint, and their wheels like a whirlwind."

Fire-power counted for a great deal in the Assyrian armies. The archer is everywhere evident, not only

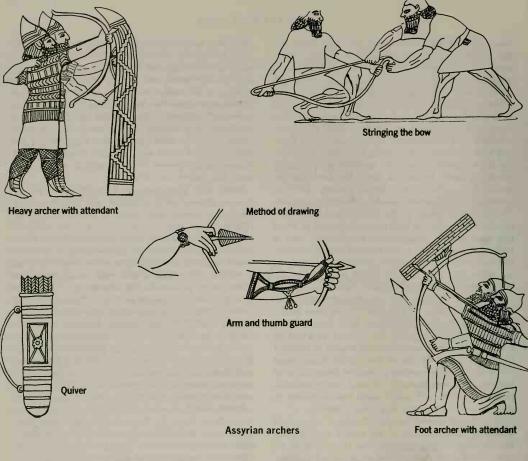
the lightly armed type—bare headed and barefooted, and clad only in a kilt-like affair—but also heavily armored. This class of bowman wore a hip-length coat of scale armor over a long fringed robe which reached to the ankles, or a knee-length tunic, under which were trouser-like leg coverings of what appears to be mail. (Whether the Assyrians actually invented this form of protection we do not know, but their reliefs certainly show it, and the archaeologist Sir Austen Layard found some oxidized lumps of iron at Nineveh which proved to be remains of some riveted mail, the earliest ever found.)

Boots, with what seems to be a short shin protection, or greave, are also shown. The helmets are of the typical conical type similar to those worn by the charioteers.

These heavy archers were protected by a shield bearer, similarly armored, and carrying a spear or sword. Some of the shields, or rather mantlets, were of wicker, taller than a man, and broad enough to eover two or three men. They were made of bundles of reeds or cane, bound side by side and tapering in to a point at the top, which curved in over the holder's head. This shield was too heavy to be earried easily on one arm, and so the shield bearer rested it on the ground, while his archer shot from behind it. If as is sometimes shown, a second shield-man was used (and this was probably only in the case of an important personage) he carried a small round shield with which he protected the archer's head. These mantlets, which were somewhat similar to those used in medieval times by the crossbowmen, were more likely to be found in siege work than in the open field. Other shields were round, some two feet in diameter if made of metal, and eonsiderably larger if made of wicker. In open combat, where missiles might be expected from many directions, the shield bearer had to use considerable dexterity to protect his man, and so the far heavier metal shield had of necessity to be small.

Not only the archers, but at times even slingers (which in all other armies were always the lightest equipped troops, fit for skirmishing only) were armored. This use of fire-power, protected, and obviously meant to hold positions in the forefront of the army, sets the Assyrian's battle tactics apart from those of any other ancient armies that we know of.

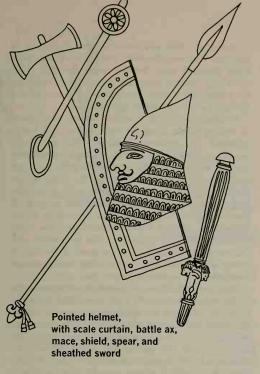
We have no means of knowing how powerful the bows in use at that time were. It is reasonable to suppose that a nation which relied so extensively upon archery as the Assyrians, would have developed the art of the bowyer to a high degree. Their bows were short and evidently quite stiff. A piece of frieze de-



picts the stringing of a bow as a two-man job, one bending the bow under his knee, while another slips the string into the nock. Such bows would drive a shaft with considerable force, but would lack the range and power of the English long bow. It is probable that the Assyrian weapons were composite bows of horn, wood, and sinew glued together. They are shown, when fully drawn, in a very full curve (there may be some artistic license here) and it is doubtful if a short wooden bow could take such a curve without breaking. Another reason for supposing that they were composition or horn - perhaps like the one with which Pandarus wounded Menelaus on the plains of Troy - is that the bows seem to have been carried strung when not in use - either on the shoulder, with the arm thrust between the string and the stave, or in a bowcase, which would have hardly been done if the bows were of wood alone.

Assyrian quivers were carried slung diagonally across the back by a strap, attached near the top and bottom of the quiver by two rings, which the bowman slipped over his left arm and head. The shafts jutted over the right shoulder, over which they could easily be drawn. Quivers were often elaborately ornamented — painted, carved, or inlaid. Presumably they were of wood or leather, or a combination of both, for no remains have been found, as would have been the case had they been of metal. Some show a rounded cover or lid, and others a sort of tasseled bag which covered the arrows, but in most cases the quivers are open, and show the ends of the feathered arrows.

The spearmen were divided into light and heavy units. The armor and helmets were in each case usually similar to those of the corresponding class of archers, although the light spearman is often shown wearing a helmet with a crest, instead of the high peak.



Some helmets, instead of lappets, had a curtain of mail hanging down from the sides and back, which protected the chin, ears, throat, and neck.

In the early days of the Assyrian Empire we hear nothing of cavalry. The great conqueror Tiglath-pileser I (c. 1130–1110 B.C.) makes no mention of them in his inscription nor do we see them depicted on any reliefs of the period. The sculptures of the time of Ashurnasirpal (c. 883–858 B.C.) show a few horsemen, though far less than the number of chariots. By the time of Sargon II and his son Sennacherib (c. 722–681 B.C.) however, the chariot is usually confined to the role of royal vehicle, and the cavalry is now prominent in battle scenes.

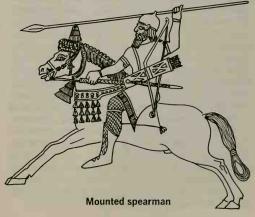
There is considerable mystery as to why the horse was for so many centuries driven, but not ridden. The Scythians are supposed to have been the first peoples to use the horse as a means of locomotion, and it was very likely that it was the impact of a nation of natural horsemen upon a non-riding civilization which gave rise to the Greek legend of the Centaur, half-man and half-horse. But the Greeks of the Heroic Age possessed horses and chariots, as had the Egyptians at least five hundred years before the fall of Troy. Yet neither made use of cavalry, nor as

far as we know, did any of the other nations of those regions. One possible explanation might be that the breed of horses available were unsuited for war purposes—too small, perhaps, and it was not until larger animals, bred on the northern steppes, were imported that it became possible to develop a mounted arm. At any rate it is certain that the earliest representations of a mounted warrior show Assyrian cavalrymen using a most peculiar and unhorsemanlike seat, with bare legs drawn up so that the knees are level with their horses' backs. There are no saddles, and the seat must have been both uncomfortable and inefficient.

These insecure-looking gentlemen are archers, and although they also carry sword and shield they are never shown using them. In fact such poor riders are they that attendants accompanied them in battle, to guide their horses and hold them while they shoot.

The fact that the early cavalry horses are shown with almost identical equipment as the chariot horses, even to the ornamental (and to a cavalryman, useless) collar; plus the use by the archer of an unarmed attendant leads to the supposition that on occasion, when the ground did not permit the use of vehicles, the chariot horses were unhitched and ridden by the archer and his driver or shield bearer.

Later reliefs show a great improvement in horsemanship. A saddle or pad is now in use, and the rider, no longer bare-legged, uses a more natural, and securer, seat. The archer now rides unattended and is so sure of his riding ability that he nonchalantly drops the reins across the horse's neck while he takes aim. There are armored spearmen, too, by this time, some of whom earry a short bow and a quiver slung across their backs. Both bowman and spearman also carry short swords.





The Assyrians were not a maritime nation, nor did they become one, even when their empire extended from the Persian Gulf to the Mediterranean. The navigation of these waters they left to their subject nations, the Phoenicians, and to a lesser degree, the Babylonians. On one of the rare occasions when the Assyrians undertook an overseas campaign, under Sennacherib, that monarch had shipwrights brought from Phoenicia to the banks of the Tigris, where a fleet was built and taken to sea. Islands close to the shore were sometimes attacked by the building of moles, such as Alexander used against Tyre, but in general the inhabitants of a seacoast city who succeeded in taking to their ships, to seek safety overseas or on an island offshore, escaped.

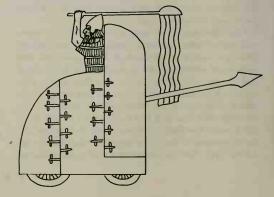
The crossing of streams and rivers does not seem to have posed any problem to the well-organized Assyrian war machine, although the armies apparently did not carry any pontoon train with them. Various kinds of boats would have been plentiful on the waterways and the bas reliefs show single chariots being transported on the tub-like coracles, made of wickerwork and covered with skins and then coated with bitumen - a type which can still be seen in the region today. Larger wooden boats, crewed by a helmsman and six rowers, held two chariots, or one chariot and a number of soldiers. Lacking such craft, rafts were made of wood, supported by inflated skins - materials readily available at almost any point of crossing. Sculptures show individual soldiers, shields on back and helmet on head, swimming along supported by an inflated hide. The horses, both chariot and cavalry, were tied to the boats or rafts and swam after them, as did the baggage animals.

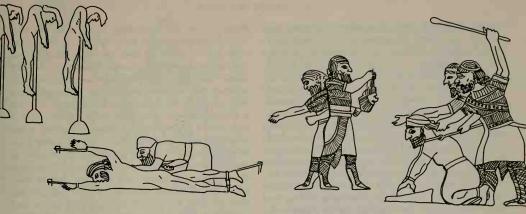
Almost all cities and towns of any importance in the Near East were fortified, and the sculptures show these places to have been of some strength. Walls were high, battlemented and pierced with loopholes for archery. They were usually flanked by towers, and entered by well-defended gateways.

To attack such a place, scaling ladders were placed at various points along the wall, and assault troops swarmed up, spearmen leading, with their large shields covering archers who followed immediately behind. While these troops tried to gain a footing on the walls, archers, protected by the larger wicker mantlets, approached as close to the walls as possible and, along with the slingers, attempted to pick off those defenders who dared show themselves at the embrasures. If they were successful and the walls' defenders were beaten down, unable to interfere with the storming parties, then one or more of the assault groups might make a lodgment, while reinforcements clambered up to their support.

If, as must often have happened, the attackers were beaten off, or if the walls were considered to be too high, the defenders too strong for an attempt to take the place by escalade, then battering engines were brought up and preparations made for a siege. Most of the walls in that part of the world were of sundried brick, which made the use of the ram feasible - and the Assyrian armies seem to have been well supplied with these engines. Some were tank-like affairs, mounted on wheels, while others were stationary, but all were shielded by frame work covered by osier or wood and further protected by hides. These last, besides some slight value as armor, were used to protect the structures against fire, one of the besieged's most effective weapons. As further insurance the outsides were kept well doused with water.

Hide-covered, wheeled battering ram—soldier is ladeling water to douse enemy incendiary missiles





Prisoners being impaled, flayed, and executed

While the battering rams were at work; amid showers of stones, fire-arrows, and vessels of flaming oil—other attackers might be trying to undermine the walls. Some worked sheltered by sheds, or underground, while reliefs show individual pioneers crouched down under large wicker mantlets, hacking away at the bricks with pickaxes. To offset the height of the walls, huge earthen ramps were sometimes made and movable towers, filled with soldiers, were built and dragged up to the battlements. From these towers, which equaled or exceeded the walls in height, a storm of archery could be directed at the defenders.

Many large cities had more than one system of defenses. The inner walls were usually taller than the outer ones, and dominated them at all points. A city defended by such concentric rings of fortifications could not be taken by storm, and siege operations would have to be undertaken. The walls would have to be breached, or taken, one by one, until the last defenses had been mastered. Once the place had fallen, the fate which befell it, and the inhabitants and garrison, would depend on the gravity of their "crime." Had they merely been defending themselves against an unprovoked attack, they might suffer only a little looting, and some minor outrages at the hands of the soldiery, coupled with a stiff fine, or imposition of yearly tribute, and the submission of the local king, chief, or governor to the Assyrian crown. This magnate might be left in charge, or he might be replaced by a "safe" man, who could be relied on to keep the new tributary in order. Again, and this was the usual policy in the later years of the empire - an Assyrian governor and garrison might be installed, in which case the ex-ruler would be "removed"—into exile, if he was lucky.

This was the mildest treatment, extended only where the city was to become a useful adjunct of the Assyrian power. More usually, the city would be looted, and the inhabitants taken back to Assyria to be sold as slaves. The plunder seems to have been brought by the looters to a central spot, where it was sorted and inventoried under supervision of the royal scribes. Presumably a large percentage went into the royal treasury, and undoubtedly the gods and priests of Assyria came in for their share. The leaders might be brought before the king—in chains, or led by rings through noses or lips. Their fate would depend on the political circumstances or the state of the royal liver.

The temples were systematically looted, and the images of the local deities born off in triumph to grace the shrines of the principle Assyrian gods, thus proving the superiority of the Assyrian deities to all others.

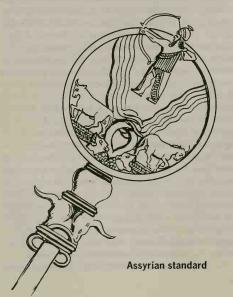
Far worse was the fate of a town which had incurred the wrath of the monarch, either by a prolonged and bitter resistance, or worse still, by rebelling against His Assyrian Highness. Here the garrison could expect certain death, and the population, such as survived the sack, had to face slavery or organized massacre. The rebellious leaders were put to death in various unpleasant ways—impaled on stakes, flayed or burned alive, while the less guilty might escape with mutilation—the cutting off of ears, lips, noses, hands, or feet. The written history of the Kings of Assyria is full of accounts of such barbarities—of populations massacred and countrysides laid waste.

"The nobles," reads one inscription, "as many as had

revolted, I flayed; with their skins I covered the pyramid . . . three thousand of their captives I burned with fire. I left not one alive among them to become a hostage . . . I cut off the hands and feet of some; I cut off the noses, the ears, and the fingers of others; the eyes of the numerous soldiers I put out . . . their young men and their maidens I burned as a holocaust."

The conduct of the majority of the conquering heroes of other nations may not have been a great deal better, but the repeated listings of such atrocities for the ages to read speaks of a savagery unusual, even in those brutal times. Nor can the Assyrian rulers be exonerated on the plea that they committed these enormities to set an example, terrorizing other communities and so, in the long run, saving bloodshed. The "examples" are too numerous and the gory details set down with what one suspects was almost loving care.

In their day the Assyrians laid their heavy hands on most of the peoples of Western Asia. When, in their turn, the tramp of enemy feet sounded in their lands, and when the smoke clouds rose over Assyrian cities, there must have been many who remembered their harsh rule—and rejoiced. As with many such states, strongly centralized and ruling an empire of subject kingdoms with a rod of iron, when the end came it came quickly, and at the close of a period which had seen the Assyrian Empire at its greatest extent. Ashurbanipal was one of Assyria's greatest



kings. Under his leadership Egypt was subdued, Susiana conquered, and Babylon held in a firm grip, while his armies fought their way deep into Armenia and across the rugged Taurus Mountains into Asia Minor. But even while the Assyrian conqueror was winning new victories, forces were gathering which were to smash his empire into the dust. To the east a new power was rising, that of the Medes. Once a collection of petty tribes and villages, they had at last united under a single monarch. As if flexing their muscles, they had already attempted an invasion of Assyrian territory. True, their rashness had brought them a stunning defeat, but the very fact of their taking the offensive against the greatest military machine of their day proved their growing power and confidence. But a greater danger threatened from the north - a danger which menaced not only Assyria, but all of Western Asia.

The Scyths

There on the steppe lands was brewing one of those great storms which from time to time have burst with dreadful fury upon the civilized lands of Europe and Asia. At intervals throughout history, the inhospitable lands of Central Asia have unaccountably spawned vast hordes of savages. These hordes for generations have bred and fought and multiplied. Then, just as a herd of cattle, milling around with a contagious restlessness, suddenly begin a movement which gains momentum until the whole herd is stampeding, the horse-born hosts have suddenly broken out of the confines of their bleak pasture lands and rolled down over the settled countries, leaving behind only death and desolation and the tracks of countless hoofs.

The terror from the north must have swept down on the peoples of the southland with devastating speed and fury. This time the invaders were Scyths, unlovely in appearance and habits, living in wagons or felt tents — and worshiping the naked sword. Great horsemen and fine bowmen, they overran most of the countries of Western Asia — according to Herodotus, from the borders of Egypt to the Caucasus. For twenty-eight years they are said to have held sway, and when the tide of invasion finally receded, they left both Assyria and Media shattered wrecks.



The Medes and Persians

The Medes seem to have recovered first, and it may be that their lands, or parts of them, especially the hilly uplands, did not feel the full sweep of the storm. Or perhaps, being a young and vigorous nation, without the vast machinery of government and complicated commercial and social structure of an old established empire, they were better able to weather the gale, and to repair damages when it was past. Whatever the cause, Cyaxares the Median king was able to launch an invasion on the weakened Assyrians, supported from the south by the revolted Susians. Betrayed by a Babylonian vassal, Saraeus (Ashurbanipal's successor) burned himself in his palace: Nineveh was besieged and taken (606 B.C.) and the Assyrian Empire was ended. When, almost two hundred years later, Xenophon led his Ten Thousand past the site of the once-great city it was a pile of crumbling ruins, and even its name had been forgotten.

The Medes were Aryan tribes, of the same stock as the Indians. They, and their kindred the Persians, had settled in the lands in and around present-day Iran—the Medes in the mountain regions of the northwest, the Persians in the south, nearer the sea.

After the fall of Nineveh, the Assyrian Empire was

divided up between the victorious allies. The Chaldeans, as the leaders of the new Babylonian Empire called themselves, took the southern provinces, Syria and the Euphrates Valley, while the Medes seized the Tigris area and the lands toward the Black Sea. Cyaxares, who had combined something of Assyrian military organization with the power of the Median cavalry, soon possessed himself of all the northwestern lands to the borders of Lydia. The proximity of the two kingdoms led inevitably to war, which dragged on for some years, the Chaldeans aiding the Medes, until ended by a truce and a triple alliance.

But Astyages, Cyaxares successor, was not the man to hold an empire. The various tribes of the Persians became united under the leadership of Cyrus—himself a vassal of the Median king. Judging correctly the weakness of the Median ruler and the frailty of the triple alliance, Cyrus led his Persians in rebellion, and after some initial set-backs, defeated the Medes and took Astyages captive (c. 560 B.C.).

The Lydian king, Croesus, alarmed at the swift rise of a new conqueror on his borders, formed an alliance with Babylon, Egypt, and Sparta against the Persian monarch. But moving swiftly, before the allies could come to the Lydians' aid, Cyrus defeated Croesus in a battle in which the Persians are said to have offset the Lydian superiority in cavalry by forming their baggage camels into an improvised camel corps which was posted in the front line. The scent of the camels frightened the Lydian horses and gave the Persian infantry, who seem to have been equipped with short spears and small round shields, a chance to attack. The Lydian cavalry dismounted and fought on foot, but, being at a disadvantage, were driven from the field. Croesus retired to his strongly fortified capital of Sardis, but it was captured by a surprise escalade and Croesus was captured. His lands and the vast treasures of his trading empire fell into the hands of

This brought the Persians into direct contact with the Greeks, for the Hellenic colonies on the Asiatic coasts, formerly tributary to the Graecophile King of Lydia, were now subjects of an Eastern potentate. Opposed to the might of Cyrus, the disunited Greek states could make no stand. A sane proposal by Thales, the astronomer and philosopher of Miletus, was that the Ionian cities should unite to form a single nation, with one Hall of Council and one place of Assembly. But it was asking too much to expect any Greek city to surrender one iota of its sovercignty, even in the face of a united foe. Another proposal, by Bias, a statesman of Priene, that all Ionians sail west and make a new city-state on the island of Sar-

dinia, shows how much the Greek cities dreaded the Persian rule. In the end the Phocaeans and the Tereans did just that: abandoning their cities and embarking on their vessels for safer parts. But the rest stayed where they were, and, as a matter of course, were taken one by one by Cyrus's generals.

An appeal for help was made to Sparta, as the strongest military power in the mother-country. The insular Spartans had no intentions of becoming involved with any entanglements overseas, but did send representatives to Ionia to report on conditions there. The tale is told that one of these diplomatspies went to Sardis, and, boldly facing the Great King, forbade him to harm any of the Greek communities, on pain of Spartan displeasure. Cyrus may well have demanded, in some bewilderment, "Who are the Lacedaemonians?" The tale was told in jest of Spartan arrogance and ignorance—but not too many years later the joke would be on the Persians.

The Greek states, forced to pay tribute and to provide ships and men for the Persian armies, remained quiet for some years. The despots who ruled them were made secure in their power by the Persian satraps, and so were not ungrateful for Persian rule. Greek men and ships took part in the first adventure of Persian arms in Europe, the expedition which Darius, successor to Cyrus's son, Cambyses, led for the conquest of Thrace. A Greek engineer from Samos constructed the bridge of boats across the Bosphorus over which the Asiatic army traveled, while a Greek fleet sailed along the Thracian coast as far as the mouth of the Danube. One result of this expedition was to bring under Persian dominion the lands east of the river Axius, and to force Macedonia to give allegiance to Darius.

So far there had been no direct clash between the Persian Empire and Greece proper. But the fires of rebellion had long been smoldering in the Ionian cities, and a series of revolts which saw the overthrow of the city tyrants and the re-establishment of democracies fanned it into a flame. Again help was sought from Sparta, and again refused; but Athens and Eretria sent ships and men, and with these allies Aristagoras of Miletus, the leader of the revolt, marched on Sardis. They failed to take the citadel, but the city itself was burned, either by accident or design. The allies subsequently met with a defeat and the Athenians marched back to their ships. Darius was incensed at the burning of the Lydian capital, and, so the story goes, after inquiring who the Athenians were, and where they lived, instructed a slave to say to him three times after every meal "Master, remember the Athenians."

Darius remembered the Eretrians, too. After the revolt of the Greek cities of Asia Minor had been suppressed and Thrace and Macedonia again subjugated, an expedition was undertaken against Athens and Eretria. The Persian fleet (six hundred ships, Herodotus says) sailed through the Cyclades, capturing island after island. Eretria was overrun, and the city taken and the inhabitants sold into slavery. That Athens did not share the same fate was due to Callimachus, Miltiades, and the men of Marathon.

The hosts of Darius and of the later Persian monarchs were made up of many nationalities, drawn from the far corners of the vast empire. This heterogeneous collection included such diverse elements as tribesmen from the slopes of the Hindu Kush, ebonyskinned bowmen from Ethiopia and fair-haired Greeks from the cities of the coast. There could not be any patriotic feeling in such an army and it is doubtful if all members of these contingents came to the national muster willingly. Ninety years later, Xenophon mentions seeing the Persian officers flogging their men on: such use of the whip does not speak well for the esprit de corps of the levies. On the other hand, many of the tribes were of fighting stock, serving under their tribal chieftains, and were probably quite happy to campaign wherever and whenever the Great King ordered.

These auxiliaries were armed and equipped after the fashion of their native lands. The Caspian cavalry, we are told, wore goatskin capes, and carried scimitars and bows made of cane. The cavalry of the Medes wore sleeved jackets, covered with iron scales. They carried long bows and short spears, and their bucklers were of reeds. The nomadic Sargatians were armed only with lassos and daggers, while the cloaked Arabians rode camels (far enough to the rear so as not to panic the cavalry mounts). It may be supposed that these exotic auxiliaries were of questionable value as an addition to the Great King's forces, but in the feudal East they were a part of every Oriental army. The backbone of the service was undoubtedly the heavy cavalry and the infantry division of the Royal Guards, the 10,000 men of the famous "Immortals" - presumably so-called because they were always kept up to full strength.

The supply service must have been efficient, although Oriental armies tended to be overburdened with camp followers and baggage trains. Where campaigns were being carried out near the coasts, water transport was used; the merchant fleets of the Greeks of Asia Minor, Phoenicia and Egypt providing the bottoms, while their naval forces assured the Persians of the necessary command of the sea. Siege weapons

do not seem to have been used by the Persians, and the taking of cities was accomplished by mining, circumvallation, or some means not requiring siege engines.

The Persian tactics depended largely on the use of cavalry. The center of the battle line was formed of the infantry, with the archers in front. The infantry advanced to within bowshot, set down their mantlets of wicker work and proceeded to shoot. As a rule they made no attempt to close but galled their enemy with their arrows. The decisive charges were made by the cavalry from the wings. Light archers and slingers acted as skirmishers. The Persian combination of missile weapons and the shock of cavalry would have been more effective, one: if the bows themselves had been more powerful and, two: if the Persian horse had charged in ranks, knee to knee, with the lance. As it was, the arrow storm was not sufficient to break up the advance of the Greek hoplites (as it must have done if the archers were comparable to the English bowmen); and the charges of the cavalry, although treated by the Greeks with great respect, were delivered in more or less loose



order, with the javelin and the bow. Such attacks lost most of their shock value and might be partly countered by the light troops stationed on the flanks of the phalanx.

In Alexander's time, when the Greek army at last had an efficient cavalry force, the Persian heavy horse could at least give the Companions and the Thessalian cavalry a battle; but the infantry could, or would, seldom stand against the massed spears of the Greek foot. Both in arms and armor the hoplite was superior, and it must be remembered that, after the unsuccessful campaign of Xerxes, the moral ascendancy was always with the Greeks. Until their defeat at Marathon, the Persian armies had an unbroken string of battles and conquests behind them. The gallant stand at Thermopylae (a Persian victory, but a costly one) followed by Greek victories of Salamis and Plataea shattered once and for all the legend of Persian invincibility - and at the same time, shook the confidence of the Persian soldiers in themselves and in their leaders.

The Persians, at the height of their power, had developed the fighting ability of the inhabitants of Asia Minor and the Middle East to its greatest peak. A series of events had put them in a position to do this: the Scythian invasions which had weakened the great military power of the Assyrians; the successful exploitation of a new combination of arms (the horse archer and the massed array of spearmen); and the acquisition by war and stateeraft of an empire of small states which furnished so vast a reserve of manpower that no power in their part of the world could resist them. This "snowballing" effect is to be noted in succeeding empires; the bigger the empire, the weaker the opposition, and the more readily it is absorbed into the stronger, making the conquering power stronger yet.

But like most Oriental empires, the Persian had inherent weaknesses. The completely autocratic kingship; the glittering and luxurious court, with its sycophants and adventurers and the intrigues of the palace women and eunuchs; the leaders without contact with the people; the lack of a national soldiery, and the increasing reliance on mercenary troops; the very size of the huge framework, making it necessary to subdivide the whole into numerous districts, each with a semi-autonomous (and usually ambitious) satrap of its own, all spelled ultimate ruin. When struck by the sharp sword of an Alexander, the awe-inspiring but fragile structure shattered, and neither the bravery of the native Persian horse, nor the stubborn gallantry of the "Immortals" could save it.



THE GREEKS

LL hail to the Greeks! Into a world of submissive, long suffering men-men of the warm valleys and deltas, priest-ridden and under the awful rule of pharaoh or priest-king, they came from the chill mountains and infertile valleys of the north, where life was a perpetual individual struggle, and where the winds of freedom blew from every mountain peak and sea-girt headland. Their thought, their way of life, was something never before known in the ancient world. Here was no sign of the abject submission to the throne of a god-king, which had been an integral part of the civilizations that had gone before - civilizations which formed the mold which was to shape the life of Asians until the beginning of our own times. Here was the world of reason - our world -as we Westerns know it.

It was not a perfect world – and the Greeks would have been the first to admit it. By our standards it

was still "ancient" with all that the word implies. Slavery flourished, and was in most cases the basis for the whole economy. In fifth-century Athens alone there were some 100,000 slaves. Many of these unfortunates had once been free citizens of independent city-states, and their lot was little lighter (perhaps, because of the freedom they had had and lost, even worse) than that of their more servile-minded fellow sufferers of Egypt and Mesopotamia. Before conducting official or private business the otherwise intelligent Greek thought nothing of dabbling elbow-deep in the entrails of a sheep, burning portions of an ox on an altar, or traveling far to listen to the ravings (usually very ambiguous ones) of some smokedrugged prophetess. The citizens of the most enlightened city in the world doomed Socrates to drink the judicial death-cup. And no one can deny that Greek democracy (not very democratic, at best) was,

mechanically, in the long run a dismal failure. Yet the inquiring mind, the joyous attitude toward

living, the free spirit, unawed by doom-dealing gods or omnipotent Kings-of-Kings, lighted a lamp which centuries of prejudice, bigotry, and ignorance have

failed to extinguish.

In the inevitable conflict with Persia, between East and West, the advantages - save that of manpower -were with the West. The polyglot levies of the Great King, raised from all corners of the sprawling empire and lacking unity, incentive, and, (with few exceptions) discipline, were matched against men of equal or superior physique, more efficient arms and equipment, and far better morale. Western intelligence and initiative were pitted against the blind obedience of the Oriental. The balance, except where tipped too heavily by sheer weight of numbers, inclined toward the Greeks - with far-reaching consequences. For the outcome of the clash between two diametrically opposed cultures and civilizations was of the utmost importance to the future of the whole Western Hemisphere. An event of such magnitude merits a brief examination of the makeup and background of the new-in reality, the first-Westerner.

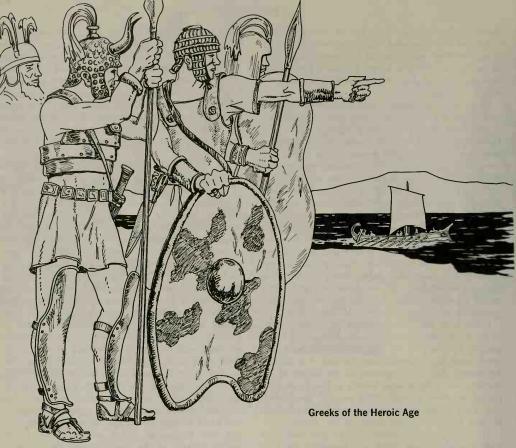
It has been said that no nation knows the history of its youth. But by comparison of its ancient languages, by study of its old legends, artifacts, and ruins, some bazy glimpses may be had of a nation's beginnings. For such fragments the pre-history of the peoples who later became known as Greeks may be pieced together. As with other peoples, the missing bits of the puzzle are the more numerous, but enough is there to give a rough sketch of the whole.

The Greeks were a member of the great family of Indo-Europeans from which are descended the Germanic peoples, the Hindus, the Celts, the Iranians, and the Slavs. In very ancient times, one branch of these Indo-Europeans pushed gradually southward from their homeland in the steppes of southern Russia and, in many stages and over long periods of time, established themselves in the northern Balkan regions. From thence, at a date believed to be no later than 2000 B.C., they began to press south and move into the Greek peninsula. The first wave of the northern invaders, Achaeans, conquered and finally mingled with the original inhabitants of the Minoan or Aegean civilization, giving them their own language and acquiring in return much of the ancient culture, which had spread from its center in the island of Crete to the islands of the Aegean, the coasts of Asia Minor, and the mainland of Greece.

From the mixing of the two races and cultures arose the Achaean civilization, whose praises were sung in the Homeric ballads. The dates assigned to this Heroic Age place it from about 1500 B.C. to 1100 or 1000 B.C. Some time about the twelfth or thirteenth centuries, the Achaeans, with other Greek tribes from the north, began migrating to the islands and mainland of the eastern shore of the Aegean. It was probably during this colonizing period that the struggle between the Achaeans and their allies and the rulers of the lands around Troy occurred—giving rise to the magnificent Homeric poems—The Iliad and The Odyssey.

But the triumph of the Achaean heroes was shortlived. Another wave of northerners, mostly made up of the iron-using Dorians, flooded into Greece. The newcomers were a less cultured folk than their Achaean kinsmen. The great strongholds like Mycenae and Tyrnins were destroyed, and many of the dispossessed peoples joined and augmented the flow of emigrants from the Greek peninsula to the eastern shores. Here, and in many of the islands, the older civilization held its own, but on the Greek mainland the impact of the Dorian invasions produced an age of ferment, a time of violent change, during which the survivors of the older systems became, with their culture, finally welded into the civilization which we know as Greek. These troubled centuries, of which we know next to nothing, have been likened to the Dark Ages of the Christian Era, which came close to blotting out all traces of the Roman culture. When the Greeks emerged into the light of history (in the eighth century B.C.) they were already possessed of an advanced culture, a polished and expressive language, and a rich background of epic literature and mythology. This civilization was a mixture of the rough, simple heritage of the invaders with the Achaean-Aegean-Minoan culture which had gone before.

In places, less accessible or more easily defended, where the tides of invasion had not penetrated, the ancient ways prevailed longer. In others, which had felt the full fury of the invaders, the old had been swept away. One thing had survived from tribal days - the strong clan instincts, forming the basis for the system of city-state which were such a vital part of the Creek way of life. These city-states were, for the most part, very small. Aristotle thought that to ensure good government the city should be small enough so that each citizen should be acquainted with all his fellow citizens. It is doubtful if any Greek city except Athens could ever put more than twenty thousand men into the field, and that would probably include all sound males between sixteen and sixty. More often the "city-state" would consist of a walled town, surrounded by outlying farms and villages, all of which



were close enough so that their inhabitants could seek safety in the town within a very short time. Many such cities were within a few hours march of each other, and often a town at deadly enmity with another was within sight of its rival. It was the small size of these little enclaves which greatly influenced the art of warfare among the Greeks and gave it a distinctive character. For unlike the individual heroes of the Homeric Age, the warriors of the city-state were citizen-soldiers, chosen from the whole body of citizenry, armed and marshaled according to their means. The chariot of the days of the Trojan War had vanished,

and the "Queen of Battles" was now the heavily armed and armored spearman - the hoplite.

These hoplites were composed of the well-to-do citizenry — those who could afford arms and armor. Their equipment was practically standardized throughout the Greek world. It consisted first of a metal helmet of iron or bronze, usually crested with horsehair (so as to make the wearer appear taller and more formidable) and often protecting not only the back of the neck, but the cheeks and nose and chin as well. There were several types of helmets but the form of casque known as the "Corinthian" is the one most

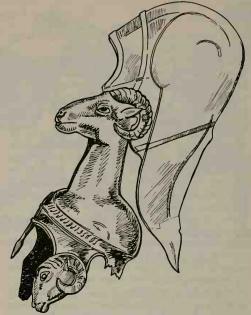


often seen in decoration and sculpture. Such a helmet was a beautiful example of the armorers' art, fashioned so that the metal on the most exposed surfaces was the thickest, and thinned as much as practical elsewhere to conserve weight. A metal cuirass—breast and backplates, hinged at one side and suspended from the shoulders by a thick leather strap—or a heavy leather tunic protected the body down to the waist.

There seems to be some difference of opinion about the body armor of the hoplite. Boutell, in his Arms and Armour, states flatly that the body defense consisted only of a leather tunic, and that the metal cuirass was worn only by horsemen. A passage from the Anabasis might bear this out. When Xenophon, taunted by a hoplite, dismounted and took the fellow's place in the ranks "he happened to have on his horseman's corselet, so that he was distressed," as if it was not normal to march in such harness. Certainly, vase paintings show body armor, much of it depicted as being molded to fit the body, and so presumably of metal (although a cuirass of molded leather would appear the same).

The weight of the hoplite's armor, including shield, has been variously estimated at from 35 to 57 pounds. The latter figure (Encyclopedia Britannica) is undoubtedly from Plutarch's Life of Demetrius. While Demetrius was besieging Rhodes "two iron cuirasses, each weighing over 40 pounds, were presented to him. One of these he gave to the . . . strongest man of all his captains, the only one who used to wear armor to the weight of two talents, one talent being the weight which others thought sufficient." One Attic talent weighed about 57.75 pounds and any armor weighing 114 pounds must have been for siege work only. The fact that these cuirasses were tested at that time by direct hits from catapult darts (which failed to penetrate) would seem to corroborate this. It is likely that the 57-pound outfit was also for siege work, as the weight seems excessive for ordinary use.

From equipment surviving from the period experts have judged the helmet to have weighed about 5 pounds, the greaves 3-4 pounds, and the cuirass about 10 pounds. This, to total 35 pounds, leaves 16 pounds for the shield. As a rough check on these figures I weighed a piece of commercial bronze plate, which appeared to be of a satisfactory thickness both as regards workability and strength. This plate (.054 inches thick) weighed approximately .25 ounces per square inch. A rough estimate of the surface area of a cuirass (breast and backplate) gave 676 square inches — equals 10½ pounds. Greaves (2) 266 square inches — equals a fraction over 4 pounds. A shield, 3



Greek helmet with silver crest (from a restoration) about 500 B.C.

feet in diameter, of the same thickness, would weigh almost 16 pounds.

A modern hunting arrow (with a head probably far superior to anything the ancients had) shot at very close range from a 50-pound bow dented the plate and penetrated about 5% of an inch. With existing equipment, at battle ranges, a cuirass made of similar material should have been impenetrable. Xenophon's recording therefore, that "There died a good man, Leonymus, a Laconian, shot with an arrow through shield and corselet into the ribs" raises again the problem of whether the corselet could have been of metal. "There" refers to the rearguard, and it is specifically stated that all the light-armed troops were in the van, so it is safe to assume that the unfortunate Leonymus was of the heavy infantry. It is remarked, however, that the Kurdish bows were very powerful, with arrows "more than two cubits long" and therefore heavy. Given a type of bodkin-headed arrow, similar to those used as armor piercers by the English, a very heavy bow might drive a shaft through two plates of bronze such as described above.

However, we may be certain that such shooting was the exception rather than the rule and that the hoplite, with Corinthian helm, shoulder-to-knee length shield, and greaves presented little target vulnerability to the average archer.

There is no doubt that some of the light-armed troops were leather armor, and cuirasses of many folds of linen, glued or stitched together, were also used. These last were probably adopted from the Persians—quilted armor having always been popular in Asiatic armies.

In any discussion of armor it must always be remembered that equipment was individually made, and where each man provided his own armor, there was bound to be considerable variation. As far as the total weight, it should also be borne in mind that it was customary for each hoplite to be accompanied by at least one attendant. This man acted as shield bearer, forager, and body servant, and in battle served as a lightly armed soldier.

The legs were protected by greaves, long enough to cover the knee but so formed as to restrict the action of knee and ankle as little as possible. These leg defenses appear to have been made to conform to the shape of the leg – fitting the calf so perfectly that no straps or buckles were necessary. The entire panoply was designed to give the wearer the utmost freedom. The movements of running, stooping, knegling, or twisting were not hampered, while the bare arms allowed maximum play for the rapid movement of sword and shield. The shield was no longer the



clumsy ankle length affair of Homeric days but was now round, some three feet or more in diameter. It was deeply "dished" and was held by a strap through which the left forearm passed, with a leather grip for the hand.

Altogether, the armor suited the athletic Greek perfectly; more protection, which could easily have been added, would have forced a complete change in tactics.

The main weapon was a heavy spear, some ten feet in length, which was used as a thrusting and not as a missile weapon. From a mention in the Anabasis of an Asiatic spear "having but one spike" it may be inferred that the Greek spear had two—the spearhead proper, and a spike on the end of the butt for planting it in the ground. With the latter-day development of the phalanx in Thebes and later in Macedonia, the length of the spear was greatly increased. In the time of Polybius (201–120 B.C.) the length of the pike, or sarisse, was 21 or 24 feet, so that the points of some six leveled pikes projected at the head of each file. This sarisse was, of course, handled in a far different way than the shorter spear of earlier days, just as the formation itself was used differently.

The sword was usually a leaf-shaped two-edged weapon, although paintings sometimes show a broad and heavy cutting sword, which bears a remarkable resemblance to the Gurkha kukri, a distinctive weapon which may have found its way to India with Alexander's army. A broad-bladed dagger, the parazonium, (the belt companion) was usually carried.

Citizens who could not afford a complete panoply acted as auxiliaries to the main body of heavy infantry—some as javelin men or as archers and slingers. These light-armed troops might be variously equipped, but the javelin man would normally carry a round shield, smaller and lighter than the hoplites; his helmet would likely be a smaller casque or skull cap, perhaps of leather, instead of the heavier warhelm of the spearman, and he probably would not wear cuirass or greaves.

The great change in Greek warfare was not in the weapons and equipment but in the concept of the phalanx of hoplites—the ordered array of armored spearmen; similarly armed, and exercised to act as one. Gone was the meeting of the individual champions, combats almost invariably begun with the shouting of insults, by which each duelist hoped to goad his opponent into abandoning his defensive position behind his huge shield and making the first, perhaps rash, move. The phalanx was no place for the individual to show off his prowess. The Greek of historic times left that for the competition of the



Fight over the body of Achilles-from a Chalcidian vase painting. Note double crest on central figure

Games. On the contrary, the safety of the whole array depended on each man supporting his neighbor—subordinating his private wishes and fears to the solidarity of the whole. The fact that in the closely knit community of the small city-state his neighbor in the ranks might well be his neighbor in civil life, was also an important factor and did much to take the place of the ingrained discipline which marked the difference between the Greek and the Roman soldier.

But the Greek – excluding the Spartans – was above all an individualist. Furthermore he was an intelligent, imaginative soul; volatile, too – possessed of great élan – but ready also, perhaps too ready, to admit defeat. His spirit – born up by the paean and the war cry, and fortified by the companionship of his close-ranked comrades – would take him forward at the double against great odds; but once the moment of exaltation had passed, and with the foe pressing hard, his intellect might bid him betake himself to a safer place. An Englishman in 1915 said rather bitterly of some allied troops, whose retirement had placed his regiment's position in danger, "They charge like hell – both ways." One suspects that the same criticism would have applied to the Greeks.

Although inter-city strife was all too common, the average Greek was not a particularly warlike person. He would unhesitatingly respond to his city's call to arms, but we have no reason to suppose that, like the northern warriors of a later era, he went joyously forth to war, as to a feast. As a responsible citizen he had other things to do, and doubtless his reactions,

when mobilized, were much the same as those of a present-day reservist when called upon to leave family and business. Nor were his spirits buoyed up by any great religious fervor – promising him eternal delights if he fell on the battlefield. The afterlife of the Greek was a gloomy, troubled thing – to exist forever in Hades. "Where dwell the dead without sense or feeling." Speaking to Odysseus, the shade of mighty Achilles says:

"I would be

A laborer on earth and serve for hire Some man of mean estate, who makes scant cheer, Rather than reign o'er all who have gone down to death."

To the life-loving Greek the prospect of exchanging the companionship of his fellow men and the fullness of his earthly existence for an eternity spent in the gloomy underworld was not an inviting one.

Unlike the Roman, whose open-order mode of fighting with the short sword demanded much training, the Greek burgher probably did not spend much of his peace time hours in military exercises. He could keep his place in the ranks and handle his shield and spear, but he could hardly be considered a disciplined fighting machine. When matched against townsmen like himself, the odds were more or less even. But when faced by men who spent their whole life training for war, the citizen-soldier usually came off second best—which, of course, was the reason for the long military pre-eminence of Sparta. It was also the reason for the increasing use of mercenary troops, professional soldiers whose sole business was to fight, and

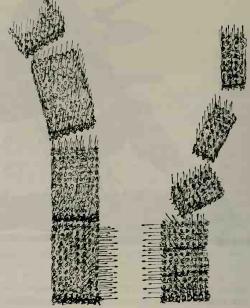
who usually more than made up by their skill and discipline for their lack of patriotic motive.

For men with the capabilities of the average citizen-soldier, however, the massed array of spears was ideal. It provided a formation reasonably easy to handle; requiring, at least in its original form, a minimum of training; and at the same time gave each member of the phalanx a maximum amount of moral and physical support. There is an interesting theory that the development of the heavily-armed foot soldier tended to promote a democratic trend, whereas in those states, like Thessaly, which relied mainly on the armored cavalry—the wealthy man on horseback—democracy won little foothold.

The composition of the phalanx varied according to circumstances. Its normal depth seems to have been eight ranks. Exactly how it was formed we do not know. The Spartans broke their array down into the mora of some five hundred men, which roughly corresponded to a modern battalion. This mora was again divided into lochoi, or companies, and further into smaller units, pentekostes and enomotai, which were equivalent to platoons and sections. The Athenians forces, and presumably those of all other Greek states are believed to have been made up of similar formations.

According to Warfare (Spaulding-Nickerson-Wright) the drill was based on the section, which was formed in column and trained to follow its leader. The width of the column regulated the depth of the phalanx, the line of battle, that is, the front of the phalanx, being a line of sections. It is also possible (and, in my opinion, more likely) that the section column was arranged so that its length, rather than its breadth, determined the depth of the mass, coming into line successively and forming on the leading section. This would bring the file leaders into the front rank, which, we are told, was always formed of the best men. An enomoty, in column four abreast, when in the line would give the usual depth of eight men.

Whatever the method of forming the array, once formed it was not very flexible. It could presumably move by right or left flank, right or left oblique, and to the rear. Its main function was to advance straight to its front, and any complicated maneuvering was out of the question. Once committed, it would be difficult, if not impossible, to halt it or change its direction. The opposing phalanx being similarly arranged (flat ground was usually sought by both sides, as the mass formation was not suitable for broken ground) the paean, or song of triumph, was raised, and the masses advanced, slowly at first, if the dis-



Two ways of forming line of battle

tance to be covered was considerable, and then with loud shouts, at the run. The two front ranks did the fighting and the rest of the formation fed in fresh men, the files moving forward as the front rank men fell. In theory, when Greek met Greek, the two masses would crash into each other with tremendous force, and keep up the struggle until the rear rank men fell. In practice, one side would probably gain a speedy advantage, either through better morale; greater impact (perhaps due to a favorable slope of ground); or a denser array, thus giving greater weight to the initial push. The weaker side would begin to give ground - there would be a melting away of faint hearts from the rear, and then the whole mass would break up and run, with the victors hacking and stabbing at the retreating backs. Pursuit by heavy armored infantry who had just engaged in combat was not likely to be of long duration, and the cavalry, whose proper function this would have been, was usually non-existent or feeble in numbers. The lighter armed troops of the early days did not amount to much, consisting as they did of the poorer elements who could not afford proper arms and equipment, and their lack of discipline and training precluded their use in any determined pursuit.

Speaking of the Spartans, Plutarch says: "After they had routed an enemy, they pursued him till they were well assured of the victory, and then they sounded a retreat, thinking it base and unworthy of a Grecian people to cut men to pieces who had given up and abandoned all resistance. This manner of dealing with their enemies did not only show magnanimity, but was politic too; for, knowing that they killed only those who made resistance, and gave quarter to the rest, men generally thought it their best way to consult their safety by flight."

The weakness of the phalanx formation lay in the vulnerability of its flanks. If attacked in flank the flanking files were forced to face outward, thus stopping any forward movement. Furthermore any attack on such a narrow target would automatically bring the assailants around to the rear of the array - a sensitive spot in any formation except one in hollow square. Thus, lacking, (as did most Hellenic states) sufficient cavalry to effectively guard both wings, the Greek commander was always exceedingly sensitive about the safety of both his flanks, and went to considerable trouble to secure them, either by thinning, and so extending, his line, or by choice of ground, or both. Miltiades, at Marathon, warned about the possible effects of the strong force of Persian cavalry operating against his flanks, thinned his center (possibly to a four-deep formation, instead of eight) but left his wings their normal depth. This enabled his line to span the gap between the two streams which flanked the plain on which the battle was fought. The Persian center drove the Greek center back, but did not break it, while the victorious wings of the Greek army enveloped the enemy center and defeated it.

The phalanx battle-almost a duel between two opposing masses - was usually decisive. The victors raised a trophy on the field, (a panoply hung on a tree stump or framework of crossed spears) and the vanquished acknowledged their defeat by sending heralds to request permission to collect their dead for burial (the shade of an unburied Greek was believed to wander ceaselessly in the underworld). Because it was essential that the phalanx be as strong as possible at the moment of impact, reserves were seldom used. For the same reason, there would be few men fit to fight left in the home city, the defense being left to the old or the very young. A clear-cut victory in the field therefore often ended the war at one blow. Seldom did the victorious army carry the war to the enemy's city itself. With the limited siege equipment available to the average small city-state, sieges were not to be undertaken lightly. Furthermore, the burgher soldiers did not look with favor upon operations which would entail their remaining in the field for prolonged periods. Thus in most cases an armistice would be arranged and peace negotiations initiated.

From hints dropped here and there in the writings of Greek historians, it may be inferred that the discipline of even the best of the heavy infantry left something to be desired. On the eve of Plataea, the Spartan general, Pausanias, had some trouble with a refractory subordinate who, on a point of honor, refused to withdraw when ordered, thus causing a serious delay while a council of war had to be held—Pausanias lacking the power to enforce his order!

Again, in the maneuvering prior to the first battle of Mantinea, when the then king, Agis, ordered an advance against a very strong position, an older soldier "hallooed to Agis" hinting that the rash advance was to make up for an earlier retreat for which the king had been much blamed. "Either in consequence of this halloo," says Thucydides, "or some new idea of his own" the king retired. A Civil War general of volunteers might expect to be so admonished from the ranks, but a Roman legionary of the Imperial Army would scarcely have so far forgotten himself. In the armies of latter-day Europe the very idea of a common soldier "hallooing" advice to his commander would have made stern sergeants faint dead away. The little incident does, however, throw an interesting light on the free and easy relationship between the Greek citizen-soldier and his elected leaders. In the ensuing battle, two captains of Spartan companies refused to move their commands on order; but their insubordination was subsequently punished by banishment from their native city - a dire fate for any Greek.

The Athenians had the same trouble with poor discipline and insubordination (although it is doubtful if they considered it anything but the normal state of affairs). As an example, the Athenian General Demosthenes wished to fortify Pylos (the modern Navarino), a strategic spot on the enemy's coast. To quote Thucydides: "After speaking to the captains of companies on the subject, and failing to persuade either the generals or the soldiers, he remained inactive with the rest from stress of weather; until the soldiers themselves, wanting occupation, were seized with a sudden impulse to go round and fortify the place."

As the use of hired troops increased, discipline tightened up, but was still hardly up to Prussian drill standards. The Greek mercenaries who fought with Cyrus (before that unfortunate young man's death, and the subsequent March to the Sea) were on one occasion ordered to advance slowly, but, the pace

quickening, "the soldiers of their own accord took to running." These same men were not above pelting their general with stones as a sign of their displeasure. It is probable that on occasion, where direct orders and threats were unavailing, a certain amount of cajoling had to be resorted to by the leaders.

With the exception of Sparta, there seem to have been no experienced under-officers in the ranks of the Greek city-states, a fact which made the Spartan army so formidable. The following quote from Thucydides infers that the system of command through a chain of officers down to leaders of a body of some thirty-two men was peculiar to the Spartan armies.

"They instantly and hastily fell into their ranks. Agis, their king, directing everything, agreeably to the law. For when a king is on the field all commands proceed from him; he gives the word to the Polemarchs; they to the Lochages; these to the Pentecostyes; these again to the Enomotarchs, and these last to the Enomoties. In short all orders required pass in the same way and quickly reach the troops; as almost the whole Lacedaemonian army, save for a small part, consists of officers under officers and the care of what is to be done falls upon many."

The cavalry, which in most states would be very few in number, was made up of the wealthy—those who could afford both harness (for the cavalryman usually wore at least a cuirass) and a horse. These horsemen were invariably stationed on one or both wings of the main body, where they served the double purpose of driving off the opposing light-armed troops—the slingers, archers, and javelin men—and attacking the similarly posted horse of the enemy.

As the Greeks rode bareback or on a blanket, and without stirrups, the lance, as used in medieval times, was impractical, and the chief weapon was the sword. However, the javelin was used and we occasionally read of mounted archers. Whether they discharged their arrows from horseback, as did the Persians and Scythians, or dismounted and fought on foot we do not know.

Although the Greek states made increasing use of cavalry, that arm never reached the strength and efficiency which it eventually did under the Macedonians. For one thing, much of Greece consisted of hilly or broken ground – definitely not "cavalry country." It would seem that the use of cavalry increased as one progressed from south to north. The Spartans had no cavalry force at all until the beginning of the Peloponnesian War and even then it was never either large or effective. Xenophon says that at the battle of Leuctra "The Lacedaemonians cavalry was at that time in a very inefficient condition, for the richest

men maintained the horses, and when notice of an expedition was given the men appointed came to ride them, and each taking his horse and whatever arms were given him proceeded at once to the field, and thus the worst and least spirited of all the men were mounted on horseback." A peculiar method of forming a brigade of cavalry, to say the least, and one which goes far to explain the uniformly miserable performance of the Spartan horse in the field.

The Athenians thought more of their cavalry, and it was a sort of corps d'elite of the young and wealthy. They amounted at one time to some 1200 men, but even so, these were only a small proportion of the total armed forces. The Boeotians, just to the north, made considerable use of cavalry and under Epaminondas it distinguished itself at both Leuctra and the second battle of Mantinea. The plains of Thessaly afforded a more suitable location for the horse raiser and the cavalryman, as did much of the Macedonian lands along the coast, and it was doubtless these considerations, plus existing social conditions, which dictated the degree of dependence on the mounted arm of the various states.

Greek cavalry was of several types. According to Denison (A History of Cavalry) there were three main divisions: heavy armored cavalry, the so-called "Greek" cavalry and the "Tarentine." The heavy cavalry, the cataphracti, were no doubt copied from the heavy horse of the Persians. They wore helmets, cuirasses, and thigh pieces; carried small shields, and their horses were protected by some sort of head armor, or chamfron, and a breastplate. The "Greek" cavalry—the type generally used, was the medium cavalry, wearing lighter armor or none at all; and whose horses were unprotected. The third class, the "Tarentine" were irregulars, variously armed, some with bows and others with javelins. The Cretans were said to be particularly skillful as mounted archers.

The bow was not despised in Greece and during the Peloponnesian War increasing use was made of archers, either native or allied. But the bow was never the national weapon, as it was in Medieval England. Its use was unsuited to the citizen-soldier concept, a bowman requiring far more training than a hoplite. The archers of Xenophon's army were Cretans and one gathers that that island was noted for its bowmen. Rhodes, it seems, was well known for the skill of its slingers, and mention is made of Rhodian units being attached to various armies.

The Peloponnesian War, dragging on as it did for twenty-seven years, brought great changes in the use and training of light-armed troops. As the war progressed, and as the wastage among the citizen-soldiers increased, the use of mercenary troops became inevitable. According to one authority, the Spartans capable of bearing arms numbered some 8000 at the time of the Persian War, but about one hundred years later they were reduced to little more than

Even aside from the losses due to battle and disease, the extended character of the operations forced a change from the old system of universal service. The average citizen could not afford to stay away from his means of livelihood indefinitely and the city found it necessary not only to supply arms and equipment, but to furnish support for his family as well. If the citizen-soldier had to be paid, it was only one step further to bire a professional in his place — a bargain which pleased all three parties. The burgher-spearman went back to his business — the state acquired the services of a trained soldier, and the mercenary had a job.

Even before the Peloponnesian War some cities had maintained small bands of trained soldiers on a full time basis, both to relieve the burghers from time-consuming military service, and as a matter of efficiency, to form the nucleus of the total mobilized force in case of an emergency.

The professional heavy-armed spearman was undoubtedly a better trained man than the average citizen-soldier, possibly almost on a par with the Spartan hoplite. But it was in the quality of the light-armed troops, the peltasts, who took their name from the small shield they carried, in which the greatest difference can be seen. It takes greater individual discipline and training to fight successfully in open order than it does in the ranks, and the professional light infantryman was a more formidable fighting man than the "poor relation" type of auxiliary of the universal service system. During the course of the Peloponnesian War the increased number and improved efficiency of the light-armed troops led to their taking a more and more important part.

Light infantry had always been a more numerous arm among the poorer and wilder states of the mountainous North. In 429 B.C. an Athenian expedition against the Chalcidians, consisting of a body of 2000 heavy infantry, 200 horse and an unspecified number of light infantry, met disaster at the hands of such troops, (an event which probably hastened the adoption of more lightly armored soldiers by the Athenians). The Athenian hoplites beat the opposing heavy infantry, but their horse and light troops were in turn beaten by the Chalcidian light troops and cavalry, who then turned on the Athenian heavy

infantry. The hoplites made a fighting retreat but "... whenever the Athenians advanced, their adversary gave way, pressing them with missiles the instant they began to retire. The Chalcidian horse also, riding up and charging them just as they pleased, at last caused a panic amongst them and routed and pursued them to a great distance."

Three years later, the Athenian Demosthenes mistakenly allowed himself to be persuaded to attack the Aetolians, who "although numerous and warlike, yet dwelled in unwalled villages scattered far apart, and had nothing but light armor . . ." Encouraged by easy initial successes, Demosthenes rashly pushed into the country, without waiting for reinforcements of light-armed javelin men, in which arm he was deficient. The Aetolians, reacting violently to the invasion of their territory, now attacked the Athenians and their allies, running down from the hills on every side and darting their javelins, falling back when the Athenian army advanced, and coming on as it retired; and for a long while the battle was of this character, alternate advance and retreat, in both of which operations the Athenians had the worst.

Still, as long as their archers had arrows left and were able to use them, they held out, the light-armed Actolians retiring before the arrows; but after the captain of the archers had been killed and his men scattered, the soldiers, wearied out with the constant repetition of the same exertions and hard pressed by the Actolians with their javelins, at last turned and fled. . . . A great many were overtaken in the pursuit by the swift-footed and light-armed Actolians, and fell beneath their javelins . . .

Thucydides mentions that the losses of the Athenian allies were heavy, but his specifically deploring the death of some one hundred and twenty Athenian heavy infantry (". . . all in the prime of life. These were by far the best men in the city of Athens that fell during this war.") shows how small were the forces of even a large city like Athens, and how serious was the loss of even one hundred and twenty citizens.

So the light-armed peltast came into his own. The composition of a later Athenian expedition shows six hundred archers to one thousand hoplites, so it is probably that the lesson taught by the Actolians was taken to heart. At Delium the Boeotian army was in the proportion of 10,000 light troops, plus 1000 horse, to 7000 heavy infantry—a large proportion of light troops even for a northern state. As it so happened their cavalry, or part of it, came unexpectedly round a hill upon the Athenian right wing, which had up to then been victorious. This body of horse was

thought by the Athenians to be another army coming against them, and they panicked—showing that too much imagination in a soldier is as bad, or worse, than too little.

In later years the Athenian Iphicrates made a great improvement in the training and equipment of the peltasts. He provided them with light armor, larger shields and longer javelins and swords. From an irregular force of doubtful value the peltasts had finally become a well-organized arm. The successes of these troops in the "Corinthian War" (c. 390 B.C.) proved once more that the light-armed man, if properly handled, posed a serious threat to the heavy infantry. In one instance, a mora of some six hundred Spartan hoplites was attacked by peltasts under Iphicrates. The heavy infantry were worn out by repeated attacks by the light troops, and many were slain ". . . and that the more grievous because it was a choice regiment of fully armed Lacedaemonians overthrown by a mere parcel of mercenary targeteers" in an action which did much to lower the military prestige of Sparta, and to raise that of the professional peltast.

Sparta

Of all the warring city-states of Greece, there was one which stood out above all the others, one whose very name stands to this day as a symbol of rigorous training, harsh living, and stubborn courage. It was by no accident that the Spartans won the position in Greek affairs which they held for so many years. They paid for it in blood and sweat. Their whole adult life was one of the camp-an existence spent with only one object in view-preparation for war. And so well did they learn their warlike lessons that for centuries the very appearance of a body of Spartans in the field was in many cases enough to assure victory. ". . . their courage was thought irresistible, and their high repute before the battle made a conquest already of enemies, who thought themselves no match for the men of Sparta. . . . " So high was their military reputation that, when 120 survivors out of 420 Spartan hoplites surrendered, after a long siege and a bitter fight with enemies numbering many thousands, it occasioned as much surprise throughout Greece as had the temerity of the Athenian leader, with seventy shiploads of men at his disposal, in attacking them.

"Nothing that happened in the war surprised the

Hellenes so much as this. It was the opinion that no force or famine could make the Lacedaemonians give up their arms, but that they would fight on as they could, and die with them in their hands . . ."

To understand the Spartan soldier one must have some understanding of the Spartan state. The Spartan people formed a military easte, under an iron discipline which held every Spartan male from birth to death. The life of the Spartan citizen was devoted to the state. Every act of every citizen was subordinated to one thing: the making of a nation of invincible warriors. To accomplish this it was necessary that the individual citizen be free of the burden of supporting himself and his family, and it was toward this end that much of the social structure of the Spartan state was directed. For the Spartans fully understood that the training of a first-class fighting man was not a part-time affair. Not for them the weekly muster, where gangling youths and portly burghers went through perfunctory drill - half serious, vet mostly glad for an excuse for an afternoon away from school or counting house. Like the professional soldier, the Spartan devoted his whole time to his trade. But when Spartan met mercenary on the field, even though in physical strength and skill with weapons they might be equal, there were two factors, decisive ones, which invariably decided the contest in the favor of the former. These were a more efficient system of command, noted previously; and much more important, a tremendous advantage in morale. This moral force was created by an intense patriotism, coupled with an almost insular belief in the superiority of everything Spartan; by the comforting knowledge that Spartan discipline was the best, and that the arms and equipment were at least equal to the enemy's; and lastly, by the unshakable self-confidence stemming from an unbroken series of victories (repeated victories which depressed the spirits of the foe as much as they exalted those of the Spartans).

The ancients, says Plutarch, "did not imagine bravery to be plain fearlessness, but a cautious fear of blame and disgrace." Unlike the citizen-soldierpoet, who could unabashedly write:

"My brave shield I have left beside a bush; and I, I ran away, because I must. Some Thracian has it now—and I my life. To Hades with the shield, it served its turn and I can buy another one, I trust."

the proud Spartan mother would prefer her son to come home on his shield rather than without it. Spartans who fled the field were debarred from all honors and it was considered disgraceful to intermarry with them. They might be beaten in the streets, without the right to resist, and were to wear patched clothing and go about unwashed and unkempt.

Nor did the stern Spartan code allow the families of the dead any sign of grief when news of death or disaster on the field was brought back to Laconia. To quote Plutarch once more: "When the news of [defeat at] Leuctra arrived . . . It was the gymnopaediae, and the boys were dancing in the theatre, when the messengers arrived from Leuctra. The Ephors, [overseers] though they were sufficiently aware that this blow had ruined the Spartan power, and that their primacy over the rest of Greece was gone forever, yet gave orders that the dances should not break off, nor any of the celebration of the festival abate; but privately sending the names of the slain to each family, out of which they were lost, they continued the public spectacles. The next morning when they had full intelligence concerning it, and everybody knew who were slain, and who survived, the fathers, relatives, and friends of the slain came out rejoicing in the market-place, saluting each other with a kind of exultation; on the contrary, the fathers of the survivors hid themselves at home among the women."

Here we have all the requisites for military preeminence, a position which Sparta proudly held for generations. In the pride and arrogance of invincibility and the aversion to change we have also the seeds of military defeat. But it was more than inability to cope with changing tactics which ultimately brought Sparta down. The roots of the trouble lay in the peculiar structure of the Spartan state, which almost ensured its own destruction by sheer loss of manpower. Admission of new citizens was almost unknown, and losses in endless wars constantly cut down the number of those with full citizenship. So did the gradual accumulation of wealth in the hands of a few men (the real cause for the decay of most states), for the poorer Spartans, unable to keep up their contributions to the common table, lost their rights. Aristotle says that Sparta broke down from lack of men. In 243 B.C. there were only seven hundred full citizens, of whom about a hundred owned all

When in ancient days the Dorian invaders flooded down through Greece the farthest sweep of the tide took some of the newcomers down across the isthmus and deep into the Peloponnesus. Here in Laconia, in the home of the ancient kingdoms, one Dorian tribe, Lacedaemonians, as they call themselves, became established in a number of villages in the valley of the Eurotas. In time one town, Sparta, won control of those round about. For long years the struggle

with the country's inhabitants, descendants of the old Achaean-Minoan peoples, went on. The Spartan stronghold was more in the nature of an armed camp, and in a sense an armed camp it always remained. For as more and more territory fell to the invaders, they found themselves a small island of conquerors surrounded by a sea of the vanquished. It was as much fear of these conquered peoples as threat from outside that set the pattern for the social structure of the Spartan state. This was even more true, when after years of fighting, the kingdom of Messenia was added to the Spartan lands. The Spartans were a harsh people, and harshly they treated the people whom they conquered. Some, perhaps those who submitted more or less peacefully, became known as perioeci, the "dwellers about." Others, less fortunate, were known as "Helots." These, the original inhabitants, whom the Spartans had dispossessed, were reduced to serfdom and cultivated the land for their new lords. After turning over a fixed amount to their masters, they were entitled to keep any surplus, and they could acquire private property. But while the perioeci managed their own local affairs, and had all other rights except political ones, the Helots had no rights at all. Their condition was hard, and they reacted by revolting again and again. To help keep them in check, a sort of secret police, the Krypteia, was formed, composed of young Spartans, who roamed the country, empowered to kill any Helot they regarded with suspicion. So that they could do this without fear of guilt, the extraordinary custom arose of having the Ephors, the councils of officers elected yearly by the citizens, declare war upon the Helots. This they did every year, upon taking office.

Young Helots were conscripted to serve as squires to the Spartan warriors and to act as light-armed troops. Those who showed exceptional bravery were sometimes rewarded with at least partial rights. During the Peloponnesian War the Spartans became so hard pressed for men that some of the best of the Helot troops were trained and fought as hoplites. Yet so strong was the ingrained fear of Helot revolt that, as Thucydides tells us:

"The Helots were invited by proclamation to pick out those of their number who claimed to have most distinguished themselves against the enemy, in order that they might receive their freedom; the object being to test them, as it was thought that the first to claim their freedom would be the most high-spirited and the most apt to rebel. As many as two thousand were selected accordingly, who crowned themselves and went round the temples rejoicing in their new freedom. The Spartans, however, soon afterwards did

away with them, and no one ever knew how each of them perished."

Truly an amiable people.

In keeping with the pattern of their culture, the Lacedaemonians, tucked away in the far corner of the peninsula, clung to the time-honored system of monarchy-long after almost all of the rest of civilized Greece had adopted some forms of aristocratic republic. Even in this the Spartans had to assert their difference from the rest of mankind. They had two kings, who ruled with co-equal authority - in itself a check on the royal power-especially as the two royal houses were constantly at loggerheads. Curtailed as their power was, the kings had supreme control of the army, and, in the field, power of life and death. The obvious faults of this system as regards dual leadership in wartime led, about 500 B.C., to a change whereby one king-chosen by the assembly - took charge of the armed forces.

A council, the Gerusia, of twenty-eight elders—men of sixty or over—and the two kings held advisory and judicial power: but perhaps the greatest power in the state was wielded by the five Ephors or overseers—who were elected by the assembly and held office for one year. These Ephors were at first only assistants to the kings. Later, possibly due to a serious conflict between the kings and the nobility on the one hand, and the common citizens on the other (a struggle in which the Ephors represented the interest of the people), they gained far greater power.

In accordance with their duty as guardians of the people's rights and as watchdogs of the state, the Ephors could even summon the kings and cause them to be tried by the Gerusia. Two of them always accompanied the king-general on his campaigns, where their presence must have been as welcome as those of a pair of political commissars on the staff of a Red Army general. Any full citizen could be elected to the office. About the only restriction to the power of the Ephors was the fact that there were five of them, that they were elected for only one year and at the end of that time, could be held accountable for their acts while in office.

Full citizenship was by birth, although some sons of Spartan men and women of other than Spartan citizenship might become citizens. According to tradition the newly conquered lands were divided into lots. Each Spartan obtained one of these farms, which could not be sold or divided, but passed from father to son. These farms were cultivated by the Helots, who could neither be sold or emancipated by their owners, and a specified amount was paid the owners each year, the Helots being allowed to keep the rest.

Thus supported by the labor of his serfs, the Spartan was able to give his undivided attention to the military training which was his whole life.

The atmosphere of the armed camp which pervaded the whole Spartan society reached into the very cradle. Children who were considered by the elders of the district to be too feeble or deformed to be of service to the state, were exposed on the slopes of Mount Tygydus. The Spartan boy began his training at seven, under care of an officer of the state. The whole purpose of his education was to train him to endure hardship and a harsh discipline. To show. signs of pain was considered disgraceful. To prove their courage Spartan boys were flogged at the altar of Artemis - Plutarch says that he saw many die under the lash. Light summer clothing was worn all winter to help harden their bodies. Deceit and cunning were prized attributes, and boys were sometimes compelled to forage for themselves, when the punishment for being caught was severe (2500 years later, similar "foraging" expeditions were part of British Commando training). The Spartan youth received little in the way of "book learning." Spartans professed to despise the intellectual attainments of such people as the Athenians; in place of rhetoric they affected a brief, concise way of speaking, which has given us our word "laconic." The memorizing of soul-stirring martial poems was about the extent of a young Spartan's literary endeavors.

At the age of twenty the Spartan youth entered the actual army, and was admitted, by vote, into a tent-company (syskanoi) of about fifteen men. Here he shared in the common meals, which was one of the customs peculiar to the Spartans. Each member of the mess paid a fixed monthly subscription in money and produce. The chief dish, we are told, was pork cooked in blood and seasoned with salt and vinegar. One shudders to think what an army cook would do with these ingredients — but the Spartans were hardy souls, and doubtless felt that griping about army food was beneath them.

A youth of twenty was free to marry, but could not live at home. His home for the next ten years was the "barracks," and any moments with his wife were fleeting ones. At thirty he became a man, with the rights of full citizenship. But the homoioi or pecrs, still messed together and their days were still spent in gymnastics and drill. Truly the Sybarite might say of the Spartans that "it was no commendable thing in them to be ready to die in wars, since by that they were freed from such hard labor and miserable living."

There is some difference of opinion as to the exact

size of the Spartan formations. Of the Spartan army at the battle of Mantinea Thucydides says:

"There were seven companies [Morai] in the field . . . in each company there were four Pentecostyes, and in the Pentecosty four Enomoties. The first rank of the Enomoty was composed of four soldiers: as to the depth, although they had not been all drawn up alike, but as each captain chose, they were generally ranged eight deep; the first rank along the whole line consisted of four hundred and forty-eight men."

Thucydides does not mention the Lochoi, but the Mora is of 512 men, the Pentecosty of 128 and the Enomoty of 32.

There was also a king's bodyguard of three hundred "knights," picked men who fought on foot. Professor Maisch, in his *Manual of Greek Antiquities* says that when cavalry was introduced into the Spartan army in 424 B.C. it consisted of six morai; each of about one hundred horse, under the command of a Hipparmostes, and divided into two squadrons.

Red tunics are mentioned as being a distinctive part of the Spartan's outfit—otherwise his equipment was similar to that of any Greek hoplite. True to their conservatism to the last, it was not until the time of Cleomenes (235–221 B.C.) that the sarissa was adopted by the Spartan hoplites and the shields carried by straps on the arm and not by the handle.

The real difference between these warriors and the other Greek states was in the training, not the equipment. Wrote Xenophon: "All the rest are amateurs; the Spartans are professionals in the conduct of war." The Spartan phalanx advanced, not like their opponents "with haste and fury" but "slowly and to the music of many flute players . . . stepping in time, without breaking their order, as large armies are apt to do in the moment of engaging."

It may be mentioned here that a characteristic of the advance of two bodies of spearmen was the tendency for each man to edge to his right. ". . . because fear makes each man do his best to shelter his unarmed side with the shield of the man next him on the right." Thus the whole array moved almost subconsciously in a right oblique movement. "The man primarily responsible for this is the first upon the right wings, who is always straining to withdraw from the enemy his unarmed side; and the same apprehension makes the rest follow him."

This movement to the right often resulted in a simultaneous outflanking (and usual defeat) of the left wing of each army; the victorious right wings then wheeling and attacking each other. To this peculiarity of men armed with sword or spear and shield (not confined to the Greeks) may be due the

time-honored recognition of the right wing as the post of honor

The Spartan hoplite won laurels on many a hardfought field, but as is often the case, a comparatively minor battle, in which only three hundred Spartans took part, captured the imagination of the men of that day and has continued to do so down the ages. Wherever tales of bold men are told, the story of King Leonidas and his gallant band at Thermopylae is usually the first to come to mind. They did not win a victory, and many other companies of devoted men, now long forgotten, also died fighting to the last man; but there is in this tale all the clements which go to make up the almost legendary hero-tales which brighten the pages of our history books. There is the narrow pass, held by the few against the many; there is the age-old conflict between Occident and Orient; and there is also the foreknowledge of death, the calm making ready for the inevitable end. Not the meek bow-the-neck end of the saintly martyr, but the fighting finish - the fierce desire to go down like a cornered wolf, snapping and slashing at everything within reach.

It is an indication of how history — or rather popular belief — often disdains the facts, that we hear little of the 400 Thebans and 700 Thespians who guarded the eastern end of the pass against the flanking movement of the Immortals under Hydarnes, nor the rest of the little 7000-man army, who presumably, attacked him in the rear. Four thousand Greeks fell at Thermopylae, we are told, and many Persians, and it seems a little unfair that three hundred should have most of the glory.

The unsuccessful attempt to hold the narrow way between mountain and sea has quite overshadowed the really great effort that Sparta made at Plataea a year later. To this field, one of the decisive ones of history, marched 5000 Spartan hoplites, each with his attendant Helots. Possibly never before, and certainly never after, did so many Spartan citizens appear on the field of battle at one time. Along with the full citizens came 5000 perioeci, each with one Helot. It was a great effort for a state with a comparatively small population. If, as we may well suppose, some of the Helots were armed (the number attending each Spartan has been placed as high as seven), the Lacedaemonians may have put 25,000 armed men in the field. The total Greek forces, from twenty citystates of varying sizes may have been close to 75,000 men. If so, it was for Greece, as well as for Sparta, a tremendous effort.

Whatever the numbers of the allies, the honors of the day belonged to Sparta. The Persians may have had some 100,000 men and their general, Mardonius, was a more skillful commander than the Spartan Pausanias, who commanded the allied armies. Various maneuvers ended in the Persian horse virtually isolating the Lacedaemonians and the small contingent from Tegea from their allies, while the Persian archers, from behind their wicker shields, rained arrows down on their array. There seems to have been some momentary hesitation on the part of the Greeks, the omens not being favorable; but a prayer to Hera, whose temple stood nearby, brought the required signs and the armored Greeks went forward with measured tread. The line of wicker shields wavered and fell, and the Spartans and the Tegeates pressed upward toward the temple of Demeter which stood on a rise before them. Here Mardonius rallied his menbut the Persians were no match for the finest spearmen in Greece. Mardonius fell, and, as so often with Eastern armies, his fall was the signal for a rout. The main battle had been won by the Spartans and their allies before the rest of the army could come up. The 8000 Athenians, while marching to Pausanias' support, were attacked by the Greeks serving with the Persians (men from several of the northern states, which had been overun by the Persians and who were now forced to serve them as allies), and brought to a standstill. The remainder of the allied army, the left, was close to the town of Plataea and reached the scene too late to take any active

This was Sparta's greatest hour. Other victories she was to have in plenty, but they would be won against Greeks, in particular against Athens. In that long struggle, Western sympathies, possibly wrongly, tend to lie more with the city which stood for so much of the finest in Greek culture. Yet, at the very end, when Athens lay prostrate, and her bitter rivals were calling for her complete destruction and the enslavement of her people, it was the Spartans who rejected the barbarous demands of their allies and granted a peace which was more lenient than the Athenians had any right to expect.

As it did to all other states, the time came when the Spartan spirit faltered. The stern laws of the semi-mythical Lycurgus fell into disuse. The influx of gold and silver from the successful campaigns of Lysander in Asia Minor was partly to blame. Hitherto Spartan money had been of iron—sufficiently unwieldy to make its use a restrictive nuisance. More to the point was the charge that the downfall of the Spartan state began with the changing of the strict laws of inheritance, whereby every man was obliged to leave his portion of land entirely to his son. By

the new law, all men had leave to dispose of their land as they saw fit. This, says Plutarch ". . . was the ruin of the best state of the commonwealth. For the rich men without scruple drew the estate into their own hands, excluding the rightful heirs from their succession; and all the wealth being centered upon the few, the generality were poor and miserable. Honorable pursuits, for which there was no longer leisure, were neglected; the state was filled with sordid business, and with hatred and envy of the rich. There did not remain above seven hundred of the old Spartan families, of which, perhaps, one hundred might have estate in land, the rest were destitute alike of wealth and of honour, were tardy and unperforming in the defence of their country against its enemies abroad, and eagerly watched the opportunity for change and revolution at home."

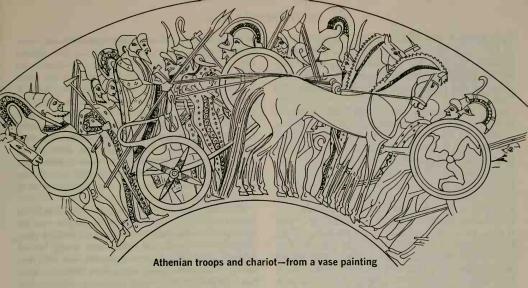
No longer could a Spartan retort to an Argive, who was bragging about the number of Lacedaemonians who lay buried in the fields of Argos, "None of you are buried in Sparta."

One reforming king was murdered by the outraged landholders. "It was dangerous, now Agis was killed, so much as to name such a thing as the exercising and training of their youth: and to speak of the ancient temperance, endurance, and equality, was a sort of treason against the state."

But a later king, Cleomenes, killed the Ephors, abolished the ephorate, canceled all debts, raised the number of citizens to 4000 by admitting perioeci, and redistributed the land. Unfortunately the reforms came too late. The reviving state was no match for Macedonia, and the victory of Antigonus over Cleomenes at Sellasia (221 B.C.) put an end to Sparta as a power.

With all the faults of the Spartan character - narrowness of outlook, lack of culture, overbearing and tyrannical behavior - (all of which were painfully evident when Sparta tried to wear the imperial mantle she had stripped from Athens), she had many admirers among the Greeks. To them there was much that was beautiful about the stark simplicity of Spartan life - something noble about the austerity of the people. As life in the other cities of Greece became more complex, the Greeks liked to point to Sparta as the true home of the old virtues - the good old Greece their forefathers knew. Whatever we may think of Sparta and her institutions (and some of them remind us painfully of Hitler's Germany) there can be no doubt that as a fighting man the Spartan has seldom been equaled.

Of the relative fighting qualities of the citizens of the other Greek states we know nothing. Presumably



they were all much the same. The slight advantages accruing to one or the other were often temporary -shifting as some of the factors in the equation changed. As to the relative military values of the various city-states, there, of course, size and wealth told heavily. Because of the minuteness of many of the Greek states, alliances were common and in many cases an absolute necessity; the alarming rise in the strength of one state being countered by a confederation of her weaker neighbors. This constantly changing system of alliances, leagues, and confederations present a bewildering pattern to the student of Greek history, woven as it was out of pride, fear, greed, and jealousy. So confused did these covenants of convenience become that at one time Athens was an ally of Arcadia and Sparta, which were at war with each other; and Arcadia was at the same time allied to Thebes, which was at war with Athens.

The century and a quarter which separated Marathon from Chaeronea saw the checking of the Persian menace, the rise and fall of Athens, the rise and fall of Sparta and the brief hegemony of Thebes. For most of that long period Greece was convulsed with wars, revolts, and bloody civil strife. The very independence and love of personal freedom which had made the Greek city-state what it was bore within itself the seeds of its own destruction. Unable to live in amity—although bound together by ties of race, religion, speech, and culture; the Greek cities squandered their brains, blood, and treasure in tearing their civilization to pieces until, spent, they fell victim to the Macedonian.

Athens

It was during this age of invasions, conquests, and rebellions that Athens rose to the pinnacle of her greatness as a dominant power; and, conforming to some recurring pattern in world history, literature and the arts responded to the electric spirit of the turbulent times, raising Athenian culture (and through Athens, all Greece), to its highest peak. Athens was the antithesis of Sparta - brilliant where Sparta was dull, full of the joy of living, where Spartans were dour, and sophisticated where Sparta was provincial. More important, Athens, recognizing the formidable quality of Sparta as a rival on land, put her trust in the sea. And it is as a great maritime power that she won her short-lived empire and her imperishable glory. In the year 459 B.C. during the great Peloponnesian War which ended in her downfall, a stone was set up in Athens recording names of members of one of the "tribes" which made up the citizenry. "Of the Erectheid tribe," it reads, "these are they who died in the war, in Cyprus, in Egypt, in Phoenice, at Halies, in Aegina, at Megara, in the same year. . . ." Truly an imperial inscription - and one which could only be written by a great naval

But if at Salamis and in the long-drawn-out war with the Spartan confederation, she showed that the Athenian navy was second to none, Athens did not by any means confine her fighting to the decks of her warships. She used her command of the sea to convey her soldiers and marines where she would, while others of her armies marched, with their allies, by land

Every able Athenian citizen was liable for service in time of war. The wealthier classes as cavalry or heavy-armed troops - the poorer class as light troops. The Athenian youth was trained for one year, then spent a year on garrison duty in the outposts and strongholds. Service was from eighteen to sixty. Mobilization was by lists, made up from the register of citizens. Each list, (there were forty-two), contained a register of these entered during a particular year. Mobilization might be total, or by calling all or part of those of one list, or class. At the beginning of the Peloponnesian War Athens could put into the field some 18,000 heavy-armed men. Cavalry were divided into squadrons or phylai of a hundred or more horse each, under a phylarchos or captain; there were some ten such squadrons, the whole under the command of two cavalry generals or hipparchoi.

The preservation of democracy was the foremost consideration of the Greek citizens, and in consequence the command of the Athenian forces (and those of other Greek states) was of a most peculiar structure. At the head of the military was the Polemarch (elected for one year) and under him were the strategoi, originally the elected military chiefs of the ten "tribes" who went to make up the body of citizens. Later the Polemarch's duties (he had other civil charges) were taken over by the strategoi and, in rotation, these held the office of general-in-chief for one day. This weird system was obviously unworkable and ultimately, when some expedition was planned, the people chose one of the strategoi to lead it, but only for that specific operation, and he had command only of those directly concerned with the expedition in question. The strategoi, having as generals become detached from their tribal regiments, the office of taxiarch was created to head these units. When Athens became a sea-power there arose the question of whether to make a separate sea-command under a group of admirals, or to combine the land and sea commands into one. The latter course was adopted, and the chosen strategos became a general-admiral. As many of the expeditions called for close co-operation between land and sea forces this was probably a happy solution.

Evidently the periods for which the military leaders were elected to serve were considered critical. The Theban generals, Pelopidas and Epaminondas, in the midst of a successful campaign against Sparta, were bold enough to defy such laws. "... new officers were to succeed, and whoever failed to deliver up his charge forfeited his head. Therefore, the other chief captains fearing the law ... advised a retreat. But Pelopidas joined with Epaminondas, and, encouraging his countrymen, led them against Sparta. . ." For this, although they were the finest military leaders Thebes possessed, and had concluded a most successful and glorious campaign, they were put on trial for their lives. Happily, they were acquitted but the incident gives an interesting insight into the severity with which the laws governing tenure of command were enforced.

The usual type of naval vessel with which the majority of Greek sea battles were fought was the trireme - a rowing galley, with a mast (perhaps two) carrying one square sail. This mast could be unstepped and lowered when necessary, and this was usually done before going into action. Much literature has been published by many experts as to the appearance and the exact manner of rowing these vessels. Unfortunately, even the most erudite can only make educated guesses. We do know that the trireme, as the name implies, had three banks or tiers of oars. This much can be made out from contemporary reliefs. But just how the rowers and benches were arranged we do not know. It has been assumed by some that there was only one rower to each oar, and that the uppermost and therefore longest oars were the only ones used when going into battle or where bursts of speed were required. These long oars were then manned by three rowers, while the other two banks of oars were shipped. Certainly it would have been all but impossible for a single man to maintain the same stroke with a long oar as the man on the lower bank with a short one. For this reason the idea has been put forward that the three banks were only used at the same time as a sort of "parade" stroke, for entering harbors, reviews, etc. It has been further suggested that for cruising the middle bank only might have been used, manned by two men, and for an even slower stroke, perhaps for maintaining station against the wind, or proceeding in company at night, the lowest bank, manned by one man to an oar, may have been used.

The crews of the triremes of the time of the Peloponnesian War numbered, we are told, some two hundred men. Of these some eighteen were marines, heavily armed, others were sailors who actually worked the ship, attended to the sails and gear, etc.; while, with the exception of the officers, the remainder were rowers. The whole idea of three banks of oars

was to conserve space and give as much rowing-power per foot of ship's length as possible. The longer a ship the harder it was to build; and Greek vessels were customarily beached when not actually in use. This meant that the vessels not only were very lightly built, but must have been, at the same time, strong enough to withstand the strain of frequent hauling ashore without hogging or sagging. This argues that the ships were comparatively short for the number of men carried, perhaps 75 or 80 feet. Also the shorter the vessel the more maneuverable, and the ship which could turn in the shortest space would have great advantage when the ram was the principle weapon. Although many reconstructions of these ancient craft show very long vessels, with as many as 85 oars aside, such vessels would have been exceedingly difficult to construct, and very slow to maneuver. In my opinion the number of oars on one side probably did not exceed 39-with three men on each upper oar, two on the middle, and one on the lowest and shortest oar. This would give 156 rowers and these, with 18 hoplites, half a dozen archers or javelin men, steermen (probably four) for the two big steering oars which hung over the stern on the port and starboard sides, the trierarchos and his under-officers, and 15 sailors, made up the two hundred.

Such a vessel, whose hull, exclusive of the outriggers on which the two upper banks of oars worked, need not have exceeded 17 feet in beam; was probably capable of a full speed (which could not be maintained for long) of about seven knots, and could cruise at half that with reduced rowing power. At cruising speed, with the rowers working in shifts, a trireme could probably cover some 50 to 60 miles a day in a calm sea. If the wind was favorable the sail would be used, either as an auxiliary or without the oars. The rowers were not slaves, chained to the benches as were the unfortunate wretches who propelled the galleys of late Roman times, but were made up of the poorer citizens or freedmen. They were capable of laying aside their oars and taking part in a boarding, or in combined operations could be used ashore. In the earlier vessels, such as those that fought at Salamis, the rowers were unprotected, except for their shields, which were ranged along the gunwales, much as in the ships of the Vikings. Later a deck, the catastroma, was added, which gave partial protection to the rowers and, more important, acted as a fighting platform for the marines.

The Mediterranean seamen were not blue-water sailors by our standards. Whenever possible they coasted by day and beached their vessels at night—while it was the invariable rule to suspend all opera-

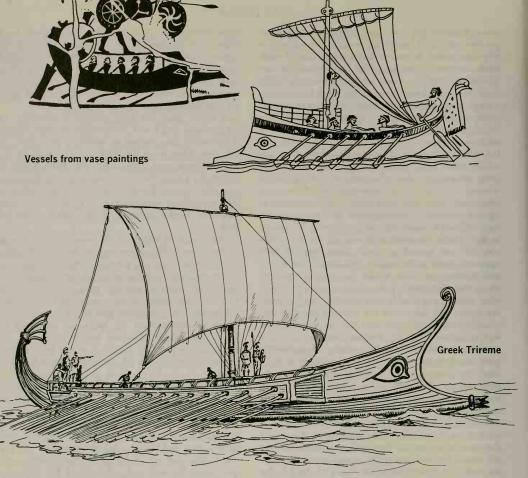
tions during the winter months. Their lightly built ships were not made for stormy seas, and losses by shipwreck or through gales at sea often far exceeded those in combat. Also, their narrow beam and shallow draft, and consequent lack of storage space, in proportion to the large crew, necessitated frequent stops for water and supplies.

If undue space has been given to a discussion of the probable build and performance of these vessels it is because they feature so widely in the history of the time. They were the chief naval weapon of the age, and were used, presumably with little change in design, by Greek, Persian, Phoenician, Carthaginian, and later, by the Romans, and some appreciation of their capabilities and limitations is necessary to understand the naval campaigns and sea fights of the period.

The success of Athens on the water depended more on the superior skill of her captains and the discipline of her oarsmen than any inherent virtue in her heavilyarmed marines. In many cases the clever maneuvering of the individual captains gave them the victory with the ram alone, without resorting to boarding.

The ram was a structural part of the hull—actually a forward extension of the keel—and consisting of this and a number of strong wales which came together at this point. It was fitted with a bronze beak and was quite capable of smashing through the thin planking of the lightly built galleys of the period. Delivered below the waterline, such blows were fatal, although there was always the danger of damage to the ram itself.

There were two standard maneuvers; the diekplous or "run through" the hostile line, smashing oars and using arrows and javelins; and the periplous or flank attack. This last called for quick maneuvering, and was where the skill and judgment of the trierarch, and the training of the rowers played a vital part. A moment lost in timing might present the vulnerable side to the enemy, and the rammer might well become the rammed. With the rowers of one side backing for all they were worth, while the others pulled alead, and aided by the two steering oars, even a sizable galley could spin around in a surprisingly quick turn. A demonstration of quick maneuvering is cited by Thucydides. A small Athenian fleet of twenty vessels was attacked by a larger force of Peloponnesians. The rear of the Athenians was overwhelmed, but eleven leading ships escaped, with twenty of the allies in hot pursuit. The leading Peloponnesian had outdistanced its fellows, and was closing on the rearmost ship of the Athenians, which was entering the roadstead of Naupactus. There was a merchantman



lying at anchor in the roadstead and the Athenian steered close aboard her. Then, circling sharply around the anchored vessel, she shot back in the direction of the enemy, and rammed the oncoming Peloponnesian amidships and sank her. This unexpected move so disconcerted the allies that they fell into confusion, while at the same time the event so cheered the Athenians that they dashed at the enemy, taking six and recapturing some of their own, lost in the first encounter.

An example of the close-order tactics of the day was the action between twenty Athenians under Phormio and forty-seven ships of the Corinthians and her allies. The Corinthians did not wish to engage so formidable a foe, but being caught in open water, they ranged their ships in a circle, sterns in, like a hedgehog, and awaited the attack. In expectation of a dawn wind, which he counted on to create confusion in the closely packed allied array, Phormio formed his vessels in line and rowed round and round the enemy, forcing them to continuously contract their circle.

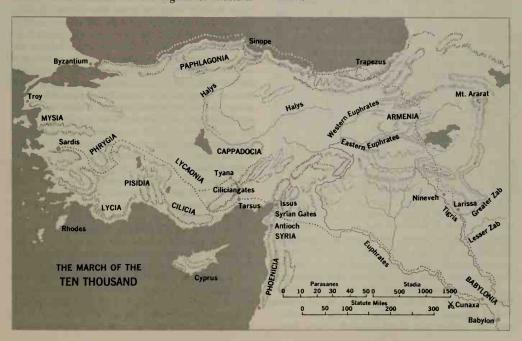
In the words of Thucydides: "He also thought that it rested with him to attack when he pleased, as his ships were better sailers, and that an attack timed by the coming of the wind would tell best. When the wind came down, the enemy's ships were now in a narrow space, and what with the wind and the small craft dashing against them, at once fell into confusion: ship fell foul of ship, while the crews were pushing them off with poles, and by their shouting, swearing and struggling with one another, made captains' or-

ders and boatswains' cries alike inaudible, and through being unable for want of practice to clear their oars in the rough water, prevented the vessels from obeying their helmsmen properly. At this moment Phormio gave the signal, and the Athenians attacked. Sinking first one of the admirals, they then disabled all they came across, so that no one thought of resistence for the confusion, but fled..."

The March of the Ten Thousand

No account of the Greek soldier would be complete without mention of the famed March of the Ten Thousand, immortalized by Xenophon in his Anabasis, or "Up-going." Nothing illustrates better the intelligence, initiative, and self-discipline of the Greek warrior as does this stirring history of the march of an army of Greek mercenaries into the depths of Asia Minor, and their subsequent retreat in the middle of winter across the mountainous regions of Armenia.

Briefly, the tale is as follows. On the death of the Persian monarch, Darius, his eldest son, Artaxerxes, ascended the throne. His younger brother, Cyrus, who held a satrapy in Asia Minor, determined to try to oust his brother from the throne, and, to this end, collected a large army at his capitol of Sardis, which stood some fifty miles east of the modern Turkish Izmer (Smyrna). By far the greater number of these troops, about 100,000, were Orientals, but the superiority of the Greek soldier had not been lost on Cyrus, and the backbone of his army was a force of some 13,000 Greeks, 10,600 of whom were hoplites. Of these 700 were Lacedaemonians, sent by their government, who owed much to Cyrus for past favors. The others were from many states, for in Greece in the year 401 B.C. there were large numbers of hardy men eager for such employment as Cyrus offered. It was three years since the defeated Athenians and their Spartan conquerors had together, to the sound of flutes, pulled down the long walls joining the Piraeus to the city. The end of the long conflict, and the rash of revolutions which had convulsed many Greek cities in the past few years had thrown large numbers of mercenaries and citizen-soldiers, to whom the joys of civilian life no longer appealed, into the military market.



These footloose soldiers were recruited by Clearchus, a Spartan, and at first the real purpose of the enterprise was kept a closely guarded secret. For it was one thing to campaign under Cyrus, the generous young satrap, against the hillmen of Pisidia (which was the objective as given out to the army) and quite another to embark on a march into the heart of the Middle East under Cyrus the Pretender-to attack the Great King himself. By the time the expedition had forced the passage of the Cilician gates through the rugged Taurus Mountains and descended to Tarsus, it was evident to even the thickest-skulled spearman that they had been deceived as to their objective, and many had begun to suspect what that objective actually was.

The mercenaries refused to march farther. Clearchus, who was a strict diseiplinarian, tried threatsbut the mutiny was too widespread. Next he tried strategy. Weeping, he told the assembled Greeks that their action had brought him face to face with a cruel dilemma: he must break his word to Cyrus or abandon his troops. This last, he said he would never do, but as they were no longer in the pay of Cyrus,

what did they want to do?

A deputation, some of whom were in Clearchus's confidence, went to Cyrus to demand to know their real destination. Cyrus told them that his real purpose was to make war on an old enemy, now on the Euphrates, and offered to raise their pay. With some misgivings the Greeks resumed their march.

Much the same procedure was gone through when the troops reached the Euphrates - and Cyrus had to admit at last that their goal was Babylon and the overthrow of the Great King. More pay was again promised, the grumbling was sileneed, and the army set out on its long march down the Euphrates. At Cunaxa, some sixty miles short of their objective they met the army of the King. In the ensuing battle the Greeks were on the right wing - although Cyrus (who had the makings of a great leader, and, who, had he lived, might have himself become a serious threat to the Greek world) urged Clearchus to shift position further to the left, where his attack would fall on the enemy's center. It was here that Artaxerxes was stationed and his fall or rout would have in all probability decided the issue. Unfortunately, Clearchus refused to depart from the Greek military maxim that the right must never allow itself to be outflanked.

The battle was joined and the Greek right swept the enemy left from the field, Cyrus, in the center, dashed forward against his brother with his cavalry and had broken the already shaken enemy horse when, advancing too far unsupported, he was slain and his army at once took to flight. The victorious Greeks returned from their pursuit to find the rest of the army routed, their camp pillaged, and the prince, from whom they expected so much, dead. Dismayed but not defeated, they refused the demands of Artaxerxes to surrender. As anxious to be rid of these unwelcome (and all but invincible) intruders as the Creeks were to be gone, the Persian monarch agreed to supply them with provisions. His general Tissaphernes undertook to guide them home by a route on which they could expect to find supplies (the territory along the 1500-odd-mile road from Sardis had been swept bare of provisions on the way in). Passing from Babylonia into Media along the left bank of the Tigris they crossed the Greater Zab, not far below the ancient ruins of the city of Nineveh. Here quarrels between the Greeks and their Persian escort came to a head, and Tissaphernes invited the Greek leaders to a conference. All too trustingly, Clearchus and his four fellow generals, twenty captains and a bodyguard of some soldiers went to the satrap's camp, where they were massacred, only one badly wounded man making his way back to the Greek lines.

The Persian satrap had no intention of making an attack on the main body of the Greeks. Having brought them deep into a strange and rugged country and deprived them of their leaders, he supposed that, when the full terror of their situation dawned on them, they would surrender. An army of Asiatics would no doubt have done just that, but the Greeks reacted differently. Their native intelligence and sense of discipline told them that if they were ever to see Greek-held territory again it must be as an organized army, and not as a mob of fugitives. They had no idea of the full extent of the dangers and hardships ahead, but their experience as soldiers warned them that to fight their way through unknown miles of strange and hostile country would be a hazardous undertaking. But, refusing to panic as Tissaphernes had hoped, they set about electing new leaders to command them on their dangerous journey.

Fortunately for them, and for posterity, there was in their company an Athenian knight named Xenophon. For political reasons, the class of knights was not popular in Athens in the year 401 B.C. and Xenophon, then about thirty-brilliant; a soldier and philosopher who called Socrates his friend - had eagerly welcomed the chance to accompany the expedition as a volunteer, without rank. His presence of , mind and obvious common sense had made him popular, and now won him election as a general. Soon his powers of persuasion and gift for leadership procured him the command.

The retreat to the sea, and so to the Greek world. which followed is an epic of military skill and endurance. Across nameless rivers, over rugged mountain ranges; in a ceaseless battle with cold, hunger, and savage native tribes, the Greek army never lost its unity or its discipline - a discipline imposed not by compulsion but by common sense. Never did a body of men face such a journey, across some of the wildest country in Asia Minor, without guides or experienced officers, and in the depth of winter.

Lacking guides, the decision was made to strike north, toward the Black Sea, on the shores of which there were Greek colonies. On the first part of their route they were harassed by the troops of Tissaphernes. The Orientals kept their distance and at night were careful never to camp closer than sixty stadia (about seven miles) from the Greeks. Many of Tissaphernes' troops were cavalrymen, who in ease of attack would have to unhobble their horse, put on the housings, bridle up, and then put on their own armor. One can imagine the confusion which would ensue if surprised in the small hours. Xenophon's remark that at night "a Persian army is difficult to manage" was an understatement.

The Cretan bowmen were outranged by the Persian archers, and the Greek javelin men could not reach the Persian slingers. Nor could the Greeks, lacking any cavalry, drive them off out of range. Casualties from the constant sniping mounted, without the Greeks being able to make effective reply. Finally Xenophon called for skilled riders from the ranks, and mounted them on the best of the baggage animals and on what few officers' mounts remained. Some fifty cavalrymen were thus mounted, and did good service in keeping the enemy slingers and archers at a safe distance. Knowing also that there were many Rhodians in the ranks, Xenophon asked for those most skillful with the sling-for which weapon the Rhodians were noted. Two hundred volunteered and were equipped with improvised slings. The advantage was now with the Greeks, for the Rhodian slingers were in the habit of using leaden bullets, which carried twice as far as the heavy stones used by the Persians.

So, improvising as they went, the Greeks marched northward - out of Media and into the wild hill country of Carduchia. The inhabitants of Kurdistan were no more tractable in those days than are their deseendants, and as they toiled upward through the passes the savage mountaineers took a heavy toll, rolling huge rocks down on the men below, and plying

javelin and bows with deadly effect. And when these grim highlands had been passed and they reached the river boundary of Armenia, they found the satrap of that province waiting with his troops on the far bank, while the mountain men still harassed their rear. They crossed by adroit maneuvering, and were able to make a truce with the satrap: an unmolested journey across his province in exchange for a promise not to pillage. (In this case the plunder would consist mainly of food. Soldiers passing through foreign territory are notoriously light-fingered, but we cannot imagine a veteran burdening himself with useless briea-brac while the snowcapped mountains of Armenia loomed up ahead.)

The crossing of such country in the dead of winter was a test of endurance which must have sorely tried even the hardiest Greeks. The route lay roughly along a line from modern Mosul, close along the western shores of Lake Van, which lies at an altitude of close to 6000 feet, and wound through the 10,000 foot peaks around Ezerum. Here they were again in hostile country; the natives, Chalybes and others, were fine archers, with powerful bows nearly three cubits long. (The ancient cubit as used in Greece varied from about 18.25 to 20.25 inches, so these bows might be perhaps four and a half feet long. The fact that such bows were remarkable to Xenophon shows how short were the average bows used by the Greeks.) The Chalybes also wore armor: padded linen cuirasses, greaves, and helmets.

But the end of the long ordeal was near. After battling their way through the lands of the hostile hill tribes they came at last to a city, Gymnias, where they were given a friendly reception and told that they were near Trapezus (Trabzon). A guide was furnished, and ". . . on the fifth day they came to Mount Theches and when the van reached the summit a great cry arose. When Xenophon and the rear heard it, they thought that an enemy was attacking in front; but when the cry increased as fresh men continually came up to the summit, Xenophon thought it must be something more serious, and galloped forward to the front with his cavalry. When he drew near, he heard what the cry was: "The sea, the sea!"

Some 8600 men reached safety, in good fighting order and in good heart. The amazing retreat was over, and a great chapter written in military history.

As remarkable as the military aspects of the march was the cohesion of the army, which continued long after they had reached civilization. Here were men, all Greeks, it is true, but from many separate states, fighting and working together under elected officers; a soldier-democracy such as has rarely, if ever, been seen since.

The adventures of the Ten Thousand were by no means over, and ultimately the bulk of them were hired by Sparta in her war with Persia—once more to face the Oriental. Their leader, who also was now in the service of Sparta, accompanied them. In this campaign he captured a Persian nobleman and his family, whose ransom enabled him to settle in Sparta, where he retired to a quiet life; hunting, and writing on numerous subjects.

In spite of being an amateur soldier, or perhaps because of it, Xenophon could improvise, and for special circumstances devise tactics not in the drill books. On one occasion, it was necessary to clear the enemy from a strongly held ridge. The approaches were over broken ground, where the phalanx could not operate (a major weakness of this formation). Xenophon formed his men in companies, each in column. These columns, of some hundred men each, advanced by the most favorable route, keeping line as best they could. The intervals were such that the line of companies outflanked those of the enemy. A group of light infantry covered each flank, and another of archers and slingers went ahead as skirmishers: attack dispositions which sound more like the twentieth century than 400 B.C. In another instance, Xenophon posted a reserve of three companies, each of two hundred heavy-armed men, some forty yards behind his flanks and center. This was also a departure from normal procedure; usual Greek practice calling for full weight in the front-line formations.

The significance of the campaign was not lost upon the Greeks. The almost accidental loss of the battle of Cunaxa was not important. What was important was that a Greek force had penetrated some 1500 miles to the seat of the Persian throne and had there defeated the forces of the Great King. Eighty years before the Persians had taken and plundered Athens. Now the tide had turned, and Greek warriors were dreaming of the sack of the great cities and palaces of Asia. The stage was being set, and in northern Greece events were occurring which would eventually produce the star performer.

Thebes

The rise of Thebes is of interest in that it was in great part due to the efforts of a fine soldier—and the change he brought about in the time-honored battle tactics of the times. More than that, it was the application of these tactics by the Macedonians to their own particular style of fighting which in part lead to the rise of that country to the leadership of Greece and the conquest of a mighty empire.

Sparta was at war with Thebes, and an army of Lacedaemonians and their allies were advancing toward Thebes when they were confronted at Leuctra by the Theban army under Epaminondas. The Thebans were outnumbered, and, arrayed against the redoubtable Spartans, could hardly have hoped to win. However, Epaminondas, realizing that if he could defeat the Lacedaemonians their allies would probably disperse, ranged his Thebans in a phalanx fifty men deep, instead of in the usual long and comparatively shallow line. This mass of men he placed on the usually weak left wing, opposite the Spartans, who, as usual, occupied the post of honor on their own right wing. After a preliminary engagement, in which the weak force of Spartan cavalry was driven off the field, the Spartan right wing marched down hill, in what had always been heretofore an irresistible advance. The Thebans also moved down from their hill into the little valley which lay between the two armies, but in echelon, the strong left wing in advance and the weaker right wing refused [held back]. The Spartans, twelve deep on this occasion, could not resist the impact and steady thrust of the dense Theban phalanx. Their king, Cleombrutus, was killed and the Spartan right was forced back up the hill to their camp, their allies retiring hastily when they saw the right wing beaten. A thousand Lacedaemonians fell, including four hundred Spartans, in this unlooked for defeat - a defeat which shocked Sparta and amazed the Greek world. Four hundred Spartans may not seem an enormous loss by modern standards, but it must be remembered that Sparta was decaying from sheer lack of manpower, and that this casualty list represented the death of possibly one fourth of her citizens capable of bearing arms.

In the nine years after Leuctra, Thebes played the leading role in the drama of Greek politics. Then at Mantinea, Epaminondas met an allied army of Lacedaemonians, Athenians, Mantineans, and others. Repeating the tactics of Leuctra, he massed his Thebans on his left, and as before, they broke through the thinner Spartan ranks. As at Leuctra, the battle was decided by the results of this onset, but Epaminondas fell leading his victorious troops. The news of their great leader's death checked the pursuit and the Thebans retired to their camp. His death marked the end of Theban supremacy, and soon the center of power was to move further north.

The Spartans seemed to have learned nothing from their previous defeat, and their tactics, and those of their allies, did not change to meet the new Theban dispositions. As noted before—long years of supremacy, ashore or afloat, tend to mold the military mind into rigid patterns, unable to cope with anything new.

Macedonia

To the North of the Creek archipelago lay the kingdom of Macedonia. These Macedonians were a people of Creek stock and traditions, but far enough removed from the centers of Greek culture to be considered rude and uncouth. They were a warlike people, and constant battling with their semi-barbarian neighbors of Thrace and Illyra had kept them in fighting trim. The kings of Macedon held a dual position, absolute rulers over the Macedonians of the coast, and feudal heads of the unruly tribesmen, many of Illyric descent, of the hill country.

Under the able and energetic Philip II the country was completely unified. As a boy Philip had spent some years as a hostage in Thebes under the tutelage of that master of war, Epaminondas. This time had been well spent. Philip improved upon the dense Theban array-thinning it to sixteen ranks and increasing the intervals to give it more maneuverability. The lengths of the spears were increased, so that, when leveled, the heads of the spears or pikes, of the fifth rank reached beyond the soldiers in the first. Allowing twelve inches per man, twenty-four inches distance between ranks, and twelve inches of pikehead in front of the first rank, this totals thirteen feet from the front of the fifth rank. A further length of five feet allowed the pikeman to hold and trail his weapon, and aeted as balance. The pike, or sarissa, is said finally to have attained a length of twenty-four feet. Such a weapon must have been very unwieldy, and it is difficult to see what advantage

was gained by adding to the number of projecting pikeheads. Such an attempt to add to the phalanx's invulnerability ultimately destroyed its usefulness altogether—and it is entirely possible that the original formation had only four projecting pikeheads, which would have reduced the sarissa to sixteen feet.

Even a sixteen-foot pike is a two-handed weapon, and in consequence the size of the shield was reduced, and it was fastened to the left arm by straps in such a way as to leave the hand free. Otherwise the armor and equipment did not vary from that of the regular Greek hoplite.

The great difference between the tactics of Philip and those of other Greek states was in his use of cavalry. The social structure of the largely agricultural kingdom was such as to ensure numbers of country "squires"; petty nobility who were accustomed to horseback, and upon whom, in preceding reigns, much of the fighting devolved. This ready-made supply of eavalrymen, an arm in which the majority of Greek states were woefully deficient, had a great influence on the development of the tactics by which Macedonia rose to military power. Despite the perfection of the infantry formation, the eavalry always remained a most important, if not the most important part of the battle line. The high place which it held in Macedonian tactics may be judged by the large proportion of cavalry in their armies as compared to those of other Greek states. The usual proportion of cavalry to infantry had been from about one to twelve to one to sixteen. Alexander's army at the outset of his invasion of Persia had cavalry in the proportion of one to six, and at the battle of Arbela there were 7000 horse to 40,000 infantry.

Macedonia was a comparatively poor country; the people farmers rather than skilled in trade and commerce. The acquisition of the rich mines of the Mount Pangaeus area on the eastern frontier ensured Philip an income of more than 1000 talents a year – a great sum and one which made Macedonia one of the richest of the Greek states. Thus furnished with a well-organized army and a well-filled treasury, Philip embarked on the program of expansion which inevitably led to conflict with the Greek cities to the south. Goaded by the bitter tongue of the orator-politician Demosthenes, the Athenians finally made common cause with their old enemies of Thebes. The battle which was to decide the fate of Greece took place at Chaeronea in 338 B.C.

Little is known about the battle, which ended in the defeat of the allies. If it followed the usual Macedonian pattern, Philip opposed the Theban phalanx with his Macedonian infantry, at the same time refusing his weaker wing. His cavalry, believed to have been under his young son, Alexander, would have been stationed on the flank of his phalanx, to attack the Thebans while they were heavily engaged with his own spearmen. Presumably this combination defeated the Thebans, and the victorious wing then turned and with the cavalry, crushed the Athenians.

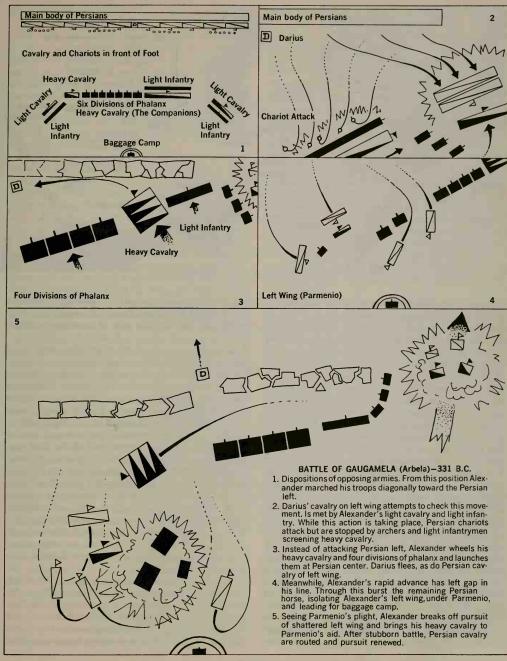
The battle gave him control of Greece, although by no means uniting the city-states into one Hellenic union, as he had hoped. The Greek communities felt no enthusiasm for a Greece united under Macedon, which state they considered as a semi-barbarous outsider. Nor did they show any eagerness to support Philip's grandiose scheme for a united Greek descent on Persia. Before he could put this invasion plan into operation a series of domestic troubles led to his murder (336 B.C.) probably at the instigation of his divorced wife, the mother of Alexander. To this son, destined to become one of the world's most renowned generals, Philip bequeathed a magnificent army, a united and prosperous homeland and a burning ambition. This he had done at the cost of a lifetime of hardship, struggle, and intrigue. Demosthenes said: "To gain empire and power he had an eye knocked out, his collar bone broken, his arm and his leg maimed; he abandoned to fortune any part of his body she cared to take, so that honor and glory might be the portion of the rest."

Under Alexander, the Graeco-Macedonian armies reached their highest development. The heavy infantry, armed with the sarissa, was organized into divisions or brigades. These divisions were further broken down into smaller units. This dividing of the phalanx gave it more mobility. It became in effect a wall broken up into blocks, flexible instead of rigid, yet retaining all its strength. But the phalanx was no longer the deciding factor. Rather it was a fortress hedged with spears, from which mobile base the cavalry could be operated. There is a common misapprehension of the true purpose of the Macedonian phalanx, and a widespread belief that the massing of men and pikes was to form a sort of military juggernaut which, by sheer weight, smashed everything beneath a moving wall of spear points. Nothing could be further from the truth. For the real striking force was the cavalry, and more particularly the heavy cavalry of the right wing. These, the Companions, were in eight squadrons, one of which constituted a royal guard. Another force of heavy cavalry, Thessalians, and second only to the Macedonian horse in valor and efficiency, were stationed on the left. Both right and left wings were strengthened by light cavalry and light infantry.

A further innovation was the formation of a new class of foot soldier. These highly trained "hypaspists" were a cross between the heavy pikemen of the regular phalanx and the light-armed peltasts. They formed a link between the phalanx and the heavy cavalry. They wore armor and were armed with a shorter spear more suitable for offensive use than the unwieldy pike of the phalanx. They may have resembled the well-organized peltast of Iphicrates, or perhaps the Greek spearman of the old Persian wars. Showing the importance of this new force, a picked body of these hypaspists constituted the Royal Foot Guards, the Agema, corresponding to the Royal Horse Guards. In battle the mobile hypaspists, stationed between the Companions and the phalanx, protected the left wing of the one and the right wing of the other. If the heavy cavalry succeeded in smashing into the enemy formations, the division of hypaspists, said to number 6000 men, were in position to exploit the breakthrough.

Basically the Macedonian tactics relied on the advance of the divisions of the phalanx in echelon, the right division striking the enemy first. The enemy's line once "fixed" by the phalanx the heavy cavalry of the right, the Companions, under Alexander himself attacked the enemy's left, supported by the hypaspists. Meanwhile any attempts on the part of the enemy to flank the left of the Macedonian phalanx was met by the Thessalian heavy cavalry and the protective wing of light cavalry and light infantry. A similar screen guarded the right of the Companions, and moved up to envelop the enemy left if the attack of the heavy cavalry succeeded. The whole system was one of mutual support, and of a combination of the comparatively immobile phalanx and the highly mobile masses of cavalry and their infantry supports.

It would be a mistake to assume that Alexander's battles followed a set pattern. His genius lay rather in the skillful way in which he could combine and maneuver the components of his splendidly trained army. His crossing of the Hydaspes in the Indian campaign, and the subsequent battle with King Porus and his hundred elephants is proof of that. This freedom of maneuver by small units was one of the great developments in the military art to come out of the wars of Alexander and his successors. Alexander also had to a high degree the faculty for arousing in his followers the greatest personal regard and enthusiasm, an enthusiasm which induced them to follow him across the wild country of Central Asia to the western ranges of the mighty Hindu Kush Mountains. Not until they reached the modern Beas, a stream northwest of the river Sutlej in the Punjab, did their





growing discontent force him to stay his advance into India, and to turn again to the West.

Following his route on the map, and taking into consideration the difficulties of the terrain alone, we wonder at the discipline, daring, and devotion of those men who followed their young leader from the shores of the Aegean through totally unknown country to places such as Samarkand, Khojend, Chitral, Kabul, and the Khyber Pass. Seldom have soldiers dared more, and if the name of Alexander is immortal, much of the credit is due to the sturdy Macedonians and men of the other Greek states who made up his army. His friends, officers, and generals may have had more difficulty in wholeheartedly serving their brilliant leader than did the rank and file. The seeming conviction in Alexander's mind that there was something divine about his origin, and the insistence on his part of the rendering to him, by Greeks and Asiatics alike, of full honors as an Eastern potentate, was the cause of much dissatisfaction. The summary execution of the veteran general Parmenio, who had shared the glory of Macedonia's greatest battles, both with Alexander and with his father before him, must have alienated many. For veteran officers, many of them past middle age, some degree of contact with a young man who at the age of twenty-five had overthrown a great empire is difficult enough. It is doubly so when the man at the top of the chain of command believes he is a god as well. However, as with most

world conquerors, the reek of countless corpses is overpowered by the sweet smell of success, and Alexander did not lack for men of ambition to follow him.

With the young monarch's death of malaria at the age of thirty-three, these same ambitious men proceeded to divide up his empire. Naturally, this involved recourse to arms, and the history of the next 150 years, until the coming of the Romans, is the story of the struggles between the states which were formed by the dismemberment of the empire. Of interest in a military sense is the increased use of mercenaries, paid for by the gold of the East, and the degeneration of the armies of some of the Macedonian monarchs of Asia Minor into the old mass armies. The forces of Ptolemy II (309-246 B.C.) are said to have numbered 200,000 infantry; 40,000 cavalry, numerous elephants and chariots, and a fleet of 1500 warships. Most figures from ancient history must be accepted with caution, but there can be no doubt that the monarch in question had an army whose characteristics, and therefore its tactical abilities, were more Asiatic than Greek.

The changes in the formation of the phalanx which Alexander is said to have ordered shortly before his death more probably refers to ones made in this later period. In this reorganization the first three ranks and the last one were of Macedonians armed with the pike, while the twelve intervening ranks were filled with Persians armed with bows and javelins. This peculiar formation, an attempt to combine missile power with shock, may have been purely theoretical. If it was actually put to the test it must, with its mixture of weapons and nationalities, have presented great difficulties, and its successful use in battle has never been recorded. If, on the other hand, as the historian Arrian says, this formation was actually devised by Alexander, it shows both his willingness to try something new, and the difficulty of maintaining a sufficient supply of recruits from the Macedonian homeland.

In the West there was in general a refinement in the art of war, more trained men (mercenaries), more professional officers, and more reliance on projectile weapons and war-elephants. In a sense there was also a degeneration. There was more guile and treachery; with mercenaries bought and sold on the field, and more use of the indirect approach.

Plutarch's life of Eumenes; soldier, secretary, courtier, and friend of Philip and of Alexander, and general under the latter in the Indian campaign, gives us a glimpse of the troubled times following Alexander's death. Eumenes was from the Thracian Chersonesus -the peninsula west of the Hellespont. This meant that to the Macedonians he was a foreigner and an outsider, and the fact that he had been the friend and confidant of Alexander merely added jealousy to their dislike. This is no place to try to recount the maneuverings and intrigues of the "successors" but from Plutarch's account we get an idea of how powerful were the bands of Macedonian mercenaries, particularly those who were veterans of Alexander's armies. Eumenes, who as governor of Cappadocia and Paphlagonia had to maintain an army, found the Macedonian foot "insolent and self-willed" and to balance their power, raised and trained a body of 6300 horse, with which he won a victory over an invading colleague (all the warring generals had once been comrades-in-arms and many were close friends). His enemy's phalanx was attacked while "broken and disordered" and forced to take an oath to serve under the victor - a common occurrence where bodies of veteran (and therefore valuable) mercenaries were concerned.

We read that when Craterus, a general famous under Alexander and popular with the Macedonians, invaded Eumenes' territory with a colleague, Neoptolemus, Eumenes deceived his own troops as to their real adversary. Even then "afraid about his Macedonians, lest, if they found out Craterus to be there, they should go over to his side" he attacks him with the foreign cavalry. The fight was a fierce one; "the spears

being soon broken to pieces, they came to close fighting with their swords." Craterus was mortally wounded, and Eumenes killed Neoptolemus in a vicious hand-to-hand struggle. The death of the beloved Craterus caused the leaders of the Macedonian world to condemn Eumenes to death, but his own Macedonians, well paid and knowing a good general when they saw one, stood by him.

As an example of Eumenes' wiles, and the frequent "arrangements" between enemy commanders, at a time when Eumenes was retreating he had an opportunity to capture his chief adversary's baggage train. But "he feared that his men, overladen with so much booty, might become unfit for rapid retreat." Knowing that he could not hope to keep them from plundering, and not daring to order them to pass up such a rich prize, he privately sent word to the commander of the baggage train to move to a defensible position in the hills. He then made as if to attack, but canceled the orders when it became obvious that the enemy was then in too strong a position. He thus made friends in the enemy camp, and at the same time was saved from the necessity of antagonizing his own men.

His success and reputation finally won him the enmity of some of his officers and particularly the leaders of the Argyraspids. These "Silver Shields" were a veteran corps of some 3000 hypaspists, who had retained their identity as a unit after Alexander's death. They were regarded as invincible. In Eumenes' last battle, against Antigonus, the rank and file remained true to him. In Plutarch's words: ". . . he at last put his men in array, and encouraged the Greeks and barbarians; as for the phalanx and the Argyraspids, they encouraged him, and bade him be of good heart, for the enemy would never be able to stand them. For indeed they were the oldest of Philip's and Alexander's soldiers, tried men, that had long made war their exercise, that had never been beaten or foiled; most of them seventy, none less than sixty years old. And so when they charged Antigonus' men, they cried out, 'You fight against your fathers, you rascals,' and furiously falling on, routed the whole phalanx at once, nobody being able to stand them, and the greatest part dying by their hands." But Eumenes' cavalry was defeated and he lost his baggage train by treachery. Then, faced with the loss of their belongings, the "Silver Shields," mercenaries now in the worst sense of the word, basely handed their general over in exchange for their baggage; which disgraceful behavior caused Antigonus later to execute their commander and disband the corps.

This tale is typical of the times, and if considerable

space has been allotted to a mention of an obscure general it is because the account seems to give a little of the "feel" of the period. The allusion to the age of the Macedonian veterans is interesting. A veteran who fought at Chaeronea at the age of forty would have been sixty-two at the date of Eumenes' betrayal. Cleanliness, good sanitation, discipline in camp, and some knowledge of bodily care would perhaps explain the difference between the longevity of the Greeks and the life span of the average medieval soldier. It is doubtful if many comparable bodies of three thousand men could be found in the Middle Ages, capable of maneuvering in armor and of routing soldiers half or one-third their age.

At a later period the Arcadian general, Philopoemen (253-184 B.C.), the "last of the Greeks" is an example of an able tactician and a fine soldier. In early youth, he distinguished himself in battle between the Macedonians and Spartans, by advancing (without orders) at a critical moment. The advance saved the day and won him the plaudits of the Macedonian general. Years later, his reputation established, he was given command of the Achaen cavalry. He evidently found this arm in sorry state, for Plutarch says: "These horsemen at that time had neither experience nor bravery, it being the custom to take any common horses, the first and cheapest they could procure, when they were to march; and on almost all occasions they did not go themselves, but hired others in their places, and stayed at home. Their former commanders winked at this, because, it being an honour among the Achaeans to serve on horseback, these men had great power in the commonwealth, and were able to gratify or molest whom they pleased."

Philopoemen succeeded, by appealing to honor and ambition and by ". . . using punishment, also, where it was necessary . . . " in turning this unpromising material into a first class fighting force. He also reorganized the infantry and ". . . altered what he found amiss in their arms and form of battle. Hitherto they had used light, thin bucklers, too narrow to cover the body, and javelins much shorter than pikes. By which means they were skilful in skirmishing at a distance, but in a close fight had much the disadvantage. Then in drawing their forces up for battle, they were never accustomed to form in regular divisions; and their line being unprotected either by the thick array of projecting spears or by their shields, as in the Macedonian phalanx, where the soldiers close and their shields touch, they were easily opened and broken. Philopoemen reformed all this, persuading them to change the narrow target and short javelin into a large shield and long pike; to arm their heads, bodies,

thighs, and legs; and instead of loose skirmishing, fight firmly and foot to foot. After he had brought them all to wear full armor, and by that means into the confidence of thinking themselves now invincible, he turned what before had been idle profusion and luxury into an honourable expense."

Having given the Achaens some pride in their equipment and arms, the next thing was to try them out on some worthy opponent. With their old enemies the Lacedaemonians on their doorstep, this presented no problem. The third battle of Mantinea, (207 B.C.) shows such an entirely different picture from the old push-and-stab battles of the Peloponnesian War that it is worth recording. According to reports Philopoemen formed his troops behind a dry ravine, his heavy infantry in small phalanxes in two lines, the units of the second line covering the intervals in the first a formation which would seem to show Roman influence. His heavy cavalry were stationed on the right, with allies and mercenaries, both horse and foot, on his left. For a wonder the Spartan leader also showed great originality. His heavy infantry in the center fronted the Achaen right, but just out of bowshot (about 100-150 yards) the column faced right and marched their own length, then faced front again. Carts bearing small catapults, thus unmasked, pushed through the intervals and drew up in line facing the enemy, the first recorded instance of the tactical use of field artillery. It is true their impact was not very great, but at least they induced Philopoemen to advance. Thereafter the battle follows a more familiar pattern. The Spartan leader, Machanidas, routed the Achaen left, but (the old familiar story) pursued it too far with his cavalry. In the meantime, Philopoemen extended his phalanx units rapidly to the left (a thing impossible in older days) and enveloped and defeated the right of the Spartan phalanx. This decided the battle, and the Spartan leader, returning too late with his victorious cavalry, was killed and his horsemen, winded from the pursuit, were dispersed. In later years, it was Philopoemen who razed the walls of Sparta, an event with which it may be fitting to close with one exception (to be cited later) the story of the warriors of Greece.

Siege Warfare

It has been said that the Greeks in their inter-city wars seldom carried the conflict to the point of besieging and storming a well-defended town. As a general rule, this was true—but when occasion demanded, the Greeks did embark on lengthy siege operations, and in such cases the native ingenuity and initiative of both besieger and besieged was displayed to advantage.

With the exception of the battering ram, the use of siege weapons seem to have been unknown in Greece in the fifth century B.C. The invention of the catapult is credited to the engineers of the Syracusan tyrant Dionysius, some time around 400 B.C. At the time of the Peloponnesian War the chief means of gaining a walled town were by mining, the ram, by building a ramp against the wall up which assaulting troops could attack, or by starvation. This last was usually accomplished by building a wall or palisade around the circumference of the place, thus blocking it off from all contact with the outside. This wall also had the advantage that a siege could be maintained with a minimum of men.

We are indebted to Thueydides for a description of the mound method of attack and of the means the besieged took to defeat it. There seems little point in tampering with 'Thueydides' excellent description, and so the passage dealing with the mound and the battering rams is quoted in full.

The Peloponnesians had advanced against Platea, and enclosed the town with a rough palisade. ". . . next day they threw up a mound against the city, hoping that the largeness of the force employed would insure the speedy reduction of the place. They accordingly cut down timber from Cithaeron, and built it up on either side, laying it like lattice-work to serve as a wall to keep the mound from spreading abroad, and carried to it wood and stones and earth and whatever other material might help to complete it. They continued to work at the mound for seventy days and nights without intermission, being divided into relief parties to allow of some being employed in earrying while others took sleep and refreshment; the Lacedaemonian officer attached to each contingent keeping the men to the work. But the Plataeans observing the progress of the mound, constructed a wall of wood and fixed it upon that part of the city wall against which the mound was being erected, and

built up bricks inside it which they took from the neighbouring houses. The timbers served to bind the building together, and to prevent its becoming weak as it advanced in height; it had also a covering of skins and hides, which protected the woodwork against the attacks of burning missiles and allowed the men to work in safety. Thus the wall was raised to a great height, and the mound opposite made no less rapid progress. The Plataeans also thought of another expedient; they pulled out part of the wall upon which the mound abutted, and carried the earth into the city.

"Discovering this the Peloponnesians twisted up clay in wattles of reed and threw it into the breach formed in the mound, in order to give it consistency and prevent its being carried away like the soil. Stopped in this way the Plataeans changed their mode of operation, and digging a mine from the town calculated their way under the mound, and began to earry off its material as before. This went on for a long while without the enemy outside finding it out, so that for all they threw on the top their mound made no progress in proportion, being carried away from beneath and constantly settling down in the vacuum. But the Plataeans fearing that even thus they might not to able to hold out against the superior numbers of the enemy, had yet another invention. They stopped working at the large building in front of the mound, and starting at either end of it inside from the old low wall, built a new one in the form of a crescent running in toward the town; in order that in the event of the great wall being taken this might remain, and the enemy have to throw up a fresh mound against it, and as they advanced within might not only have their trouble over again, but also be exposed to missiles on their flanks. While raising the mound the Peloponnesians also brought up engines against the city, one of which was brought up upon the mound against the great building and shook down a good piece of it, to the no small alarm of the Plataeans. Others were advanced against different parts of the wall but were lassoed and broken by the Plataeans; who also hung up great beams by long iron chains from either extremity of two poles laid on the wall and projecting over it, and drew them up at an angle whenever any point was threatened by the engine, and loosing their hold let the beam go with its chains slack, so that it fell with a run and snapped off the nose of the battering ram."

In the meantime both besiegers and besieged were, of course, making good use of bows, slings, and javelins. Whether some form of mantlet was used is not known, but their extensive use in Asia Minor

would argue that they probably were. An unsuccessful attempt to burn the town followed. First the space between the wall and the mound was filled with faggots of brushwood, and then more were thrown over the wall into the town. A dangerous blaze resulted, but no fatal damage was done. Finally a wall and ditch was made around the town and the main body of the Peloponnesians withdrew.

Like many others this wall of circumvallation was a double one with a ditch on either side, and protected at intervals with towers or forts—able both to keep the besieged inside, and to frustrate any attempts at relief. The distance between walls was sixteen feet. Later in this same siege over two hundred Plataeans made good their escape by means of scaling ladders; choosing a stormy winter night when the guards on the wall were sheltering in the towers. The remainder of the garrison held out for some time longer, but finally succumbed to hunger, and were all slain.

Later in the war an ingenious device, a forerunner of the flamethrower, was used in the attack upon the Athenian-held fort at Delium. Evidently part of the walls of the fort had some wood in its construction, a kind of wattle-and-daub structure on top of a stone foundation, perhaps. (Had the wall been entirely of wood such an elaborate engine would not have been necessary.)

"They sawed in two and scooped out a great beam from end to end, and fitting it nicely together again like a pipe, hung by chains a cauldron at one extremity, with which communicated an iron tube projecting from the beam, which was itself in great part plated with iron. This they brought up from a distance upon carts to the part of the wall principally composed of vines and timber, and when it was near, inserted huge bellows into their end of the beam and blew with them. The blast passing closely confined into the cauldron, which was filled with lighted coals, sulphur, and pitch, made a great blaze, and set fire to the wall, which soon became untenable for its defenders, who left it and fled; and in this way the fort was taken."

The earliest catapults seem to have been mercly oversized bows, shooting heavy arrows or darts. These bows were mounted on frames and bent, or cocked, by mechanical means, usually a windlass, with a ratchet and pawl device of some sort incorporated in it. Later, it was found that a catapult working on the torsion principle was more powerful than the flexion type using the one-piece bow. In the torsion system a pair of arms were passed through the skeins of two massive cables fastened in short frames on

either side of the slide on which the missile rested. The string was pulled back against the "twist" of the cables, and when released the arms of the bow flew forward, propelling the missile with great force. If some sort of pocket was fastened in the middle of the bowstring, stones could be hurled instead of darts. Some of these stones were of considerable size, weighing, we are told, as much as 180 pounds. Of course, the range of such a monster would be very short, but the dart throwers could shoot much further. Such catapults built in the nineteenth century based on the ancient models have thrown darts almost 500 yards. There is evidence that hand crossbows were used, but because of inferior design, materials, or workmanship never became a factor in military operations.

In the fourth century B.C. movable towers were in use to bring missile power against the defenders of walls, and some were also fitted with gangways which could be dropped onto the battlements, enabling stormers to pour across onto the defenses. One of these engines, the largest on record, was constructed for Demetrius, whose military exploits had won him the nickname, Poliorcertes - the besieger. Accounts of its size vary - Plutarch gives it as 24 cubits (about 36 feet) square at the base, and 33 cubits, or just over 50 feet high (others credit it with heights of from 100 to 150 feet, and a base 50 to 75 feet square). It had several stories, with openings for catapults and archers. These loopholes could be closed by shutters. There were also, we are told, large containers for water and fire buckets on each floor. The tower was mounted on wheels and was pushed into action by hundreds of men, some inside and some at the back and sides. Reports which give the number of wheels as eight, mounted on eastors and the number of men as 3400 should be taken with a large grain of salt. For one thing, 3400 men, even in mass formation, take up a half acre of ground and the interesting question arises as to what they pushed against. Hauling was out of the question if the tower was to be brought close to the wall, and the number of men who can push and lever against an object even 75 feet square is limited. Granting the eastors, although even modern ballbearing ones are inefficient where a great weight is involved, there would have been many more than four wheels on a 75-foot side, probably ten or twelve at the very least.

The reader of ancient history should be warned that the reporters of old seemed to lose all sense of proportion when dealing with mechanical contrivances, and tended to make the marvel even more marvelous by gross exaggeration. Be that as it may, the war-engines of the fourth century Greeks were ingenious mechanisms, and indicate that, even in those far-off days, some of the best brains of each age were devoted to the art of destruction.

The great days of Creece ended in a series of uncoordinated attempts to stave off Roman domination. With the final defeat of the Achaean League and the destruction of the great city of Corinth in 146 B.C. the history of the Greeks as independent peoples comes to an end. For 250 years the Greek fighting man had maintained his supremacy in the lands of

the eastern Mediterranean. He had destroyed a great empire and set up a greater; and had raised his trophies in remote regions to which men would not penetrate again for twenty-two centuries. His coming marked an epoch in world history. And while his land at last passed under the sway of the Roman legions, his shade may have been appeased by the knowledge that when Rome was a ruined city, at the mercy of the barbarians, the bulwark of civilization was the Greek-speaking, Greek-thinking Empire of Byzantium.



THE ROMANS

T HAS been said that the course of all history has been determined by the geological fact that certain hills close by the Tiber were lower and nearer together than the other hills of the adjacent countryside. That happy accident of geography made it natural for the tribes dwelling on or around those low hills to combine into one city-state, larger and with more manpower than those other single towns which dotted Latium, as the country lying south of the lower reaches of the Tiber was called. These numerous little hill towns of the region (tradition has it that there were thirty of them) had joined themselves into a Latin league. By virtue of its size and wealth (the Tiber is the most important river of central Italy and, with its numerous tributaries, formed a valuable trade route), the city on the seven hills which the inhabitants called Rome, soon held the leadership of the league.

This city-state, like many others, went through cy-

cles of progress and regress, expansion and retrenchment, good government and bad, peace, foreign war and civil strife; under kings, tyrants, and consuls. Victory over the rival city of Veii, (396 B.C.) was offset by the sack of Rome by the Gauls (389 or 390 B.C.). The Capitol, alone, on its hill, held off all assaults for seven months, after which time the invaders withdrew, having burned the city and plundered the countryside. That destruction Rome never forgot, and it was eight centuries before another invader set foot in the city. Those centuries saw the little city on the Tiber become the head, heart, and soul of a vaster empire than the world had yet known: saw, too, that empire rot and crumble from within, so that at the end it was but a thin brittle shell surrounding a shrunken kernel of decaying meat.

There is always something sad about the fall of a champion, even one as rough and brutal in his ways as the Roman. It is with some feeling of relief from the unrelieved gloom of the dying years of the Western Empire that we realize that the traditions of the most effective, as well as the longest-lived army in history did not perish with the fall of Rome but, transported to the East, served there for another thousand years as the bulwark of Christendom against the Asiatic invader.

This superb fighting machine, which in its heyday carried the eagles of Rome from the heather-clad mountains of Scotland to the sands of Egypt, and from the Atlantic coasts of Spain to the shores of the Caspian, had a humble enough beginning. As in most city-states, the necessity for defense led to the enrollment of all males of fighting age into a state militia -divided into units according to the wealth, (and therefore the ability to equip themselves) of the citizens. There were the rich young scions of noble houses who owned not only arms and armor, but horses, as well. There were the well-to-do burghers in their bronze helmets and cuirasses and greaves, carrying bronze shields and armed with sword and spear. And there were the poorer folk armed and armored as best they could afford.

In this, the first of several phases in the development of the Roman army, every citizen from seventeen to sixty was liable for military service, those under forty-seven on active duty in the field and the older men for garrison duty. Enrollment, as in all early armies, was for the summer months. Winter campaigns were seldom, if ever undertaken, and with the onset of bad weather the citizen-soldier went home.

The formation was the familiar phalanx; ranks of spearmen (the best-equipped men in front) with cavalry and light troops on the wings. Tactics probably differed little, if at all, from those normally employed by the Greeks. The army in the days of Servius Tullius (c. 580 B.C.) is said to have totaled some 19,300 men, made up of 18 centuries of horse; 80 centuries of the first class, fully armed, of which 4000 men were on the active list: 10 centuries each of active and reserve men of the second class - who supposedly carried wooden shields; 10 centuries each of the third class - without greaves; 10 centuries each of the fourth class, who had no cuirass or helmet, and carried only the wooden shield, sword, and spear; and 10 centuries each of the poorest citizens armed with darts and slings. There were also 15 centuries of engineers, musicians, etc. These figures cannot, of course, be taken as exact, but they probably give a good idea of the military set-up in the days just prior to the formation of the republic.

If the fighting man of Rome at this period was in



Roman spearman about 500 B.C.

any way superior to the warriors of Greece we have no proof of it. Both were similar in arms and equipment, and, had they met on the field of battle there could have been little to choose between them. It is not until the second stage in the military history of Rome is reached, and we may be sure it was reached gradually, that the Roman war machine begins to emerge as something entirely new, differing radically from any that had gone before.

In comparing the army of Rome with those of the Greek city-states it must be remembered that the political system, by which Rome absorbed and assimilated her neighbors and planted colonies in other parts of Italy, gave her far greater manpower, while her growing commercial interests provided the necessary sinews of war. Thus in 225 B.C. the total manpower of Rome has been estimated at three-quarters of a million, of which some 325,000 were citizens and 425,000 were allies. The field armies totaled some 65,000 men, with another 55,000 in reserve. In respect to money it was not until the prolonged siege of Veii that the Roman soldier received any pay. Before that

time the citizen donated both his arms and his services to the state.

Just when the changes occurred, which were to convert the phalangite army into the system with which Italy was conquered and the Punic Wars fought, is not known—but in all probability they were instituted about the same time that the Macedonians were developing the phalanx of sarissae. The systems were diametrically opposed: the Macedonians deepening the old eight-line formation while the Romans thinned it, and opened it out, so as to give their swordsmen freer play.

The new formation, known as the "manipular" legion was made up in a way quite unlike that of any other. The word "legion" which had in the old days referred to the whole levy, was now applied to a specific number of men, believed to be about 4500. This number was to vary officially from time to time in the history of the Roman army, and, unofficially, the units were very seldom at full strength. Losses in combat, sickness, and later, the detaching of units from the legions for special duties all tended to keep the legions below their assigned strength.

The 4500 man manipular legion was made up of 3000 heavy armed men, 1200 light armed (velites), and 300 horse. The distinction as to weapons and equipment had largely disappeared and troops were now classified according to age and length of service. The youngest, those from seventeen to twentyfive years of age, served as velites, or light troops. Of the heavy armed men, the men from twenty-five to thirty years old were known as hastati, or "spearmen"; the second group, of more experienced men of thirty to forty, were known as principes or "leaders"; and the oldest and steadiest, the veterans of forty to forty-five, made up the triarii or "third line men." These men composing the first two groups were divided into maniples of 120 men each. According to most authorities these maniples were arranged 12 front by 10 deep. Other estimates vary, and it is possible that the depth may have been changed to eonform with the width of front desired. There was an interval equal to a maniple front between each maniple. Allowing four feet of front per man, the legion front was just over 300 yards. The distance between the three formations, Dodge says, was 250 feet. The maniples of the triarii had only 60 men, and stood behind the intervals of the principes, which, in turn, were drawn up behind the intervals of the hastati.

The greatest addition to the effectiveness of the new Roman army lay in the adoption of a new piece of equipment, the *pilum*. With this famous weapon the legionaries subdued the best part of the known

world. It is a strange thing that, with all the hundreds of thousands which must have been made, not even an accurate picture or piece of sculpture remains to show us exactly what it looked like. Polybius described it as a pear having a large head, on a long shank, the end of which formed a socket for the shaft. This shank was some 20 inches long, and swelled out at the base to form a socket for the shaft. The shaft was short and heavy, perhaps five feet in length. The whole affair was more like a whaler's harpoon than the traditional javelin.

The weapon could be used as a thrusting spear, or to ward off sword blows, for which the long iron shank was ideally suited. But its primary use was as a missile. Because of its weight it could not be thrown very far. → 20 paces was probably the limit of its effective range. If not deflected, it could cause a terrible wound, but an alert warrior would have no difficulty in catching such a relatively clumsy missile on his shield. And herein lay the great advantage of the new weapon. For once firmly in the enemy's shield, the soft iron shank would bend — allowing the shaft to drag, and, being so heavy, the enemy would find his shield unmanageable. With the enemy's shield so encumbered as to be useless, the legionary went to work with his sword.

A quote from Caesar's *Commentaries* shows the effectiveness of the *pilum*, which remained the legionaries' chief weapon for more than six hundred years.

"Hurling their javelins from above, our men easily broke up the enemy's mass formation and, having achieved this, drew their swords and charged. In the fighting the Gauls were seriously hampered because several of their overlapping shields were often pierced by a single javelin; the iron head would bend and they could neither get it out nor fight properly with their left arms. Many of them, after a number of vain efforts at disentangling themselves, preferred to drop their shields and fight with no protection for their bodies."

In combination with the *pilum*, the legionary used a most efficient sword. This latter weapon, the two-edged *gladius Ibericus*, adopted from the Spanish or Iberian sword, was exceeding short—less than two feet. It was primarily a thrusting weapon, calling for more skill and training than the longer slashing weapons of the barbarians. It was particularly deadly at close quarters, and in the hands of skillful and courageous men, it was all but irresistible. Being short, it could be worn on the right side—an advantage when a large shield was carried, and when trying to draw while jammed in a press of men. The

new system was an effective combination of missile power and shock, with the added advantage of a dependable reserve.

No accurate account of the battle-tactics of the manipular legion have come down to us, but the action would seem to have begun with volleys of javelins, after which the legionaries rushed in to close quarters with the sword. The general effect was similar to the volley of musketry, followed by the bayonet charge, of the days of Wellington.

If, in a hard fought battle, the division of hastati became weakened through losses and exhaustion, they could retire between the gaps in the line of the principes, who then pushed forward to take their place. It would seem that the veteran triarii, who were armed with the long spear instead of the pilum, were held back in reserve as long as possible. The light troops also seem to have been used to bolster the fighting line on occasion, though it is likely that they were normally stationed on the flanks. Livy tells us that in a battle with one of those Latin communities which had not as yet become part of Rome itself, the fight was hard and long, with no advantage to either side. The hastati and principes of both sides were deadlocked, yet both commanders hesitated to commit their third line men. At last the Roman sent in his light-armed troops, whose arrival in the fighting line was just enough to induce the opposing commander to send in his last armored reserve. When they had become fully engaged, the Roman ordered in his own triarii, and the impact of these veterans turned the scale.

The legion was commanded by six tribunes, usually men of position; sometimes veteran soldiers, sometimes young men of good family beginning their careers. The real guidance of the legion lay with the 60 centurions, men who had in most cases fought their way up through the ranks. They were picked by the tribunes, and held responsible positions, comparable perhaps to those of company sergeant majors or warrant officers. There were grades in the rank of centurion, the highest being that of Primus Pilus—senior centurion of the 1st maniple of triarii.

The Roman cavalry of the early days was, as in nearly all nations and states, made up of members of the aristocracy. If, in later times, the patrician element was outnumbered by those who had attained the status of the equestrian order by property rather than birth, it was only in keeping with the increasingly commercial spirit of the times.

The tactical unit was the *turma*, made up of three *ducuriae* of *ten* men each. These "tens" were each commanded by a *decurion*. The senior *decurion* com-

manded the *turma*. The *turma* was formed for action in three ranks, ten in front, or four ranks, eight in front. The senior *decurion* led in front, with the second *decurion* on the right flank, and the third on the left. There were ten *turmae* to each legion. Their usual position was on the wings but they were sometimes held back as reserve, and occasionally stationed out in front.

Besides the citizen-soldier of the legions, the Roman army of this period also contained large numbers of socii or "allies." These troops were armed and equipped like the legions, but they were organized into cohorts of some 400-500 men, instead of in maniples. They also had attached cavalry, but these were usually more numerous - according to Denison (A History of Cavalry) twice as many as were attached to the regular legions. These socii, by the way, are not to be confused with the barbarian auxiliaries. They were for the most part Italians, and in later years, with the extension of the franchise (90 B.C.) would become Roman citizens. Sixteen turmae of allied or auxiliary cavalry formed an ala ("wing" or squadron) and was commanded by a prefect. These allied cavalry were called equites alarii while the Roman cavalry was called equites legionarii. Before the Punic Wars, the Romans had never developed the cavalry arm, and its use as a shock weapon was not properly appreciated. The struggles in Italy were usually decided by the legions, with the cavalry in a scouting role, or in pursuit of a flying enemy. It was for that master of the art of war, Hannibal, to bring home to the Romans the necessity for reform of their mounted arm.

While not used in such numbers as they were in later years, the legions of the first part of the third century were sometimes accompanied by auxiliaries (non-Latins). These were usually armed with the weapons peculiar to their native lands, and were commanded by their own chiefs and/or Roman officers.

The Romans elected two consuls each year. Each consul normally had command of two Roman legions, the same number of allied infantry, the legionary cavalry and the larger force of allied horse. If both consuls took the field together, they usually each commanded for a day, in turn; a system which probably only the Romans could make at all workable. Combined consular armies at full strength would number 16,800 Roman legionaries; 16,800 allied foot; and 1200 legionary and 2400 allied cavalry.

The maniple formation called for training, skilled use of weapons, and good discipline. It was well suited to the class of legionary which Rome was then capable of producing, for there is no doubt that the citizen-soldier of the early days of the republic was far superior to any who came after. The men who faced Pyrrhus and Hannibal were men of property, substantial burghers to whom enrollment in the ranks was a jealously guarded privilege. Such men, who fought for Rome with a spendid patriotism and an admirable self-discipline, did not need threats of dire punishment to keep them to their duty. To them service to the state was something sacred. And while the Roman discipline was a fearsome thing, to which no Greek, with the possible exception of the Spartan at his best, would have submitted, the driving force behind the Roman soldier of those proud days was the heartfelt desire to do his best for his country, rather than fear of the lash.

The superior discipline of the Roman armies was in part due to the Romans' early training and to their habit of obedience to the law. They would seem to have had an inborn respect for authority, coupled with a warlike tradition and spirit of militarism which made them accept the harsh discipline, toil, and hardship of a soldier's life. Much credit must also be given to the centurions and under-officers. Then, as now, the backbone of any unit was its non-commissioned officers, and those of the Roman military machine seem to have been particularly efficient.

Any comparison between the Greek and the Roman systems of the period is difficult to make, as when they did clash the event were poorly recorded. Or let us say, rather, in deference to the historians of the time, that next to nothing of what they wrote - and it was probably plenty - has come down to us. The occasion of the clash was the arrival in Italy of Pyrrhus, ruler of Epirus, and a seasoned general, one whom the great Hannibal is said to have rated the foremost general of his time and second only to Alexander the Great. He came in answer to a call for aid from the Greek colony of Tarentum, which had become involved in a quarrel with the rising power of Rome. Pyrrhus, who was a great admirer of Alexander, and who had modeled his army after the most approved Macedonian standards, joined with the unwilling Tarentines (who seem to have expected him to do their fighting for them). With the expectation of aid from other Latin allies, he encountered a Roman army under the Consul Valerius Lavinius, on the banks of the Siris (280 B.C.).

The battle began with a cavalry action, in which the Greek cavalry was driven off the field. Legion and phalanx are said to have clashed seven times, without decisive result. At last the battle seems to have turned in favor of the Romans, and the consul threw his victorious cavalry on the flank of the Greeks. But among the forces which Pyrrhus had brought to Italy were twenty and dephants. These were brought up to meet the cavalry, and their arrival in combat caused as much consternation among the Romans, who had never seen such monsters before, as did the appearance in 1916 of the first tanks. The Roman cavalry was thrown into confusion, and fleeing horsemen and pursuing elephants broke the ranks of the legionaries, and the rallied Greek cavalry did the rest. Losses were heavy on both sides (hence the term, Pyrrhic victory), but could more easily be born by the Romans than by the invader, who had lost many of his choicest troops.

Although Pyrrhus advanced to a point near Rome, the senate refused to come to terms. In 279 he again defeated a Roman army (and again with severe loss to his own) but still could not come to an agreement (which by now he very much wanted) with the stubborn Romans. He next moved into Sicily, which he almost completely wrested from the Carthaginians. His high-handed methods alienated his allies and, baffled, he crossed again into Italy. At Beneventum was fought a decisive battle (275) in which the Romans won a complete victory, capturing four elephants, among much other booty. Pyrrhus, the flower of his veterans dead, disgusted with his allies, and realizing that he could not make headway against the power of Rome, sailed back to Greece. His remark upon leaving Sicily, that he was leaving the island as a fine field of battle for the Romans and the Carthaginians, proved a truly prophetic one. Within ten years the two nations were at war-a war which would try Rome to the utmost, and which would see the republic rise to its greatest heights.

The Punic Wars

The struggle with Carthage was a long and bitter one. On one side was a great city with an established mercantile and commercial empire, with great riches and a powerful fleet. On the other was the growing military might of a Rome with ambitions for commercial and political leadership. The mere presence of Carthage in Sicily was a source of irritation to a city which had already acquired position as suzerain of all Italy. The claiming by Carthage of a monopoly in all Mediterranean waters, and the right to seize all foreign ships between Sardinia and the Pillars of Hercules, was another reason for the ultimate clash of the two powers.

The First Punic War (264-241 B.C.), long and bloody though it was, was but a preliminary to the far more deadly struggle which would follow. But it was remarkable for several things. First, it soon became apparent that the Carthaginian troops were no match for the splendid legionary infantry. For, for all its size and wealth (the population of Carthage proper has been estimated at about 1,000,000 and the yearly revenues at 12,000 talents or some \$17,000,-000), the Carthaginians never developed anything like the citizen-soldier of the Roman state, and relied almost exclusively on mercenaries. These troops, while they might serve a successful general well and faithfully, had no attachment to Carthage, except in so far as she provided supplies and pay. And when the pay was in arrears, as it sometimes was, they more than once revolted. Secondly, the war saw Rome emerge as a naval power. The decision to build a fleet followed the realization that as long as Carthage held undisputed sway over the sea lanes, she could reinforce and supply her fortified bases in Sicily at will, and so prolong the war indefinitely.

The determination to embark on an entirely new style of warfare, with which the Romans were completely unfamiliar, was typical of the Roman senate of those days. While the Latin cities of the coasts were familiar enough with ships and the sea, and undoubtedly built and owned war vessels, neither they nor the Romans possessed any fleets of warships which could stand for a moment against the heavy quinqueremes of the Carthaginian navy. The story goes that before the outbreak of war, a Carthaginian envoy warned the Romans not to bring matters to open hostilities as, without Carthaginian permission, no Roman could even wash his hands in the sea.

If the tale is true, it is a good example of Carthaginian naval supremacy-and Carthaginian arrogance. It also showed that the citizens of the great African city had sadly underestimated their enemy. For in those days ships were of relatively simple construction, and where there was timber and iron and skilled labor there could soon be a fleet - a fact which the Carthaginians should have remembered. It may be true that for a model for their new navy the Romans used a stranded Carthaginian quinquereme, a type which the naval architects of that city are said to have developed. Whatever the source of their designs the Romans pushed the construction of their vessels with characteristic energy. According to Polybius these ships - a hundred quinqueremes and twenty triremes were built in sixty days. As before noted, ancient historians were not overaccurate when it came to figures, and it has been estimated by Rod-

gers (Greek and Roman Naval Warfare) that if, as he supposes, the Roman quinqueremes averaged about 120 tons, to complete the task in the given time a minimum of 165 men must have been employed on each-timber cutters, ship's earpenters, ironworkers, etc. or a total of 20,000. Also, the exact design and build of a quinquereme, or pentere, has never been accurately determined. The old idea that such a vessel had five banks of oars has been more or less discarded by modern experts, and it is thought that it is more likely that such a vessel had five men to an oar, or sweep, and that the oars were arranged on one level rather than five different ones. It has also been suggested (Admiral Scre: Marines de Guerre de L'Antique) that the type took its name from having five large oars aside. This would mean a far lighter vessel, with a much smaller crew than would fit Polybius' description of a ship with 300 rowers and 120 soldiers, as well as sailors and officers.

Here again is illustrated the difficulty of correctly translating technical meanings from the original text. To some historians five banks obviously meant oars on five different decks, yet in modern terminology to double-bank oars in a ship's boat or cutter is to put two men to each oar.

The ships were soon to have additional equipment which was typically Roman in concept, and which was to make a great difference in the outcome of the naval engagements of the war. Evidently the ship's commanders were not satisfied with the results of the first clashes. The Punic ships, able and skillfully handled, had succeeded in evading the attempts of the Romans to board. To successfully grapple the Carthaginian ships, and to nullify their superior maneuverability, the Romans resorted to a device known as a corvus (literally, a raven). As the description of Polybius is generally interpreted, the corvus was in effect a stout gangway, the end of which was attached to a topping lift fixed to the head of a short mast. The gangway, wide enough for a couple of men to cross it abreast, was held upright by the lift tackle, and fastened to a pivot at the base, much like a cargo boom and derrick mast. On the underside of the outer end of the gangplank was a large iron spike, from which resemblance to a raven's beak the contraption got its name. When an enemy ship was close aboard, the topping lift was let go and the upper end of the gangway fell outboard, driving the iron spike deep into the enemy's deek. The fighting detachment of legionaries then rushed across in double rank and their superior numbers and discipline did the rest.

In deference to those who think the Polybius' de-

scription has been misinterpreted or is exaggerated, it is also possible that the contrivance was merely a device for putting a grapnel aboard an enemy ship. In support of this, in a standard Latin dictionary one meaning of the word *corvus* is given as "a grappling iron."

Whatever the mechanics of the thing were, there seems to be no doubt that it gave the Romans, with their large boarding parties, a marked advantage and enabled them to rack up an impressive series of naval victories. And it was these victories and the subsequent control of the sea, that allowed the Romans for the first time to land an army on foreign soil, in this case, Africa.

The First Punic War ended with the seceding to Rome of Sicily and the payment of an indemnity. Further pressure two years later added Sardinia and Corsica to the Roman conquests. The Carthaginians under Hamilcar Barca sought to recoup their losses by acquiring an empire in Spain. This in time aroused the jealousy and suspicions of the Romans, who soon found an excuse to push Carthage into another war. Under ordinary circumstances the war might have been won by another Roman invasion of Africa, but the new general of the Carthaginian forces in Spain was Barca's son, named Hannibal. The Romans were to find that against Hannibal circumstances were never ordinary, and after an epic crossing of the Alps, the great Carthaginian appeared in Italy. It was the Romans' misfortune to be forced to confront, with men of mediocre talent, one of the most brilliant soldiers the world has ever seen. Their superiority in infantry, both as to quality and numbers, was offset by the far stronger and more ably handled bodies of Carthaginian horse. Under Hannibal's leadership, it was this cavalry which gained battle after battle, for the Roman legionary soldier proved time and again that, given half a chance, he could beat his opposite number in the Carthaginian ranks.

The battle at the Trebia River is a good example. The Roman commander, Sempronius, foolishly allowed himself to be drawn into attacking Hannibal, on that general's own ground, with troops who had not yet had their morning meal, and who had had to cross a breast-high stream in the depths of winter. The Carthaginian cavalry drove off the far weaker Roman horse and attacked the legions on their flank, while another force, which had been skillfully concealed, assaulted them from the rear. The Italian light troops and the remaining cavalry on the flanks were routed and the attacks pushed hard against the Roman heavy infantry of the center. These troops, hungry, half-frozen, with their flanking troops

smashed, and the swift stream at their backs, never lost heart. The Carthaginian phalanx, as yet unengaged, stood in front of them. Closing their ranks the unshaken legionaries advanced, defeated the Carthaginian center, broke their way through it, and made good their retreat.

As indomitable as the morale of the legions was the spirit of the Roman senate and people. Defeat followed defeat, but men and money were always scraped together for still another effort. A disastrous battle on the shore of Lake Trasimene saw the smashing of an army of 40,000 men and the following year the almost complete annihilation at Cannae (216 B.C.) of the largest army that Rome had ever put into the field. Eight legions, each raised to onefifth above normal strength, and an equal number of allies were sent out under the two consuls for the year, Paullus and Varro. Paullus was a competent soldier-Varro a politician, a typical "man of the people." The latter, using his decisive vote in the council of war, as supreme commander during his day's turn in office, ordered an attack on ground of Hannibal's own choosing. The Romans numbered some 76,000 at the battle, the Carthaginians 50,000. Again Hannibal's superior force of cavalry turned the tide in favor of his outnumbered army. The Roman horse was driven away after heavy fighting, the light troops routed, and the legions, jammed together with no room to maneuver, were assailed on all sides and slaughtered. Perhaps never was so large an army so completely beaten. The losses among the Carthaginians were about 6000 men but of 76,000 Romans, some 70,000 lay dead, among them the consul Paullus. Ten thousand more who had garrisoned a fortified camp were surrounded and the majority taken prisoner the next day. (Polybius puts the number killed at 70,000 - with 10,000 prisoners. Livy; 42,700 dead.)

This remarkable envelopment and destruction of a larger force by a smaller one has long intrigued students of military history. The Roman formations were made very deep, the maniples in column rather than line and with reduced intervals. This certainly was a factor contributory to the disaster, but it is possible that closer formations were thought necessary because the newly raised legions were not well trained enough to safely adopt the more open order. Certainly, the Romans had learned nothing from their previous defeats, but the saying is probably true: that two things are necessary to bring about a Cannae-a Hannibal and a Varro. The news of the disaster shook Rome, and after such a slaughter of citizens we may well believe that every home was in mourning. A large percentage of the whole number of

Romans capable of bearing arms were dead. Varro, who was not ashamed to survive the massacre, gathered some thousands of the survivors into some sort of order. The Roman senate, displaying, as Polybius puts it, "the noble peculiarities" of their ancestors, in one of its grandest moments, accepted the responsibility for the defeat, and publicly thanked the beaten general for—and there may have been some irony in the phrase—"not having despaired of the republic."

Worse news was to follow. Some of the southern allies began to go over into Hannibal's camp. Syracuse sided with Carthage, adding her fleet to that of the enemy, as did the second largest city of Italy, Capua, which could put 30,000 infantry and 4000 cavalry into the field. Philip V of Macedon made an alliance with Hannibal, which subsequently resulted in war, and as if matters were not bad enough, before the end of the year a sizable Roman force which had been sent to Gaul was ambushed and destroyed by the tribesmen.

With a seemingly unconquerable enemy firmly established on Italian soil, with many former allies deserted and the flower of her armies slain, the Romans might have been excused for faltering. But instead they fought back with dogged determination. In Mommsen's words, "the senate preserved its firm and unbending attitude, while messengers from all sides hastened to Rome to report the loss of battles, the secession of allies, the capture of posts and magazines, and to ask reinforcements for the valley of the Po and for Sicily at a time when Italy was abandoned and Rome almost without a garrison."

Every effort was made to raise another army. All men over sixteen were called out, debtors and criminals were armed, and eight thousand slaves were purchased by the state and armed. At the same time nothing was done which would make it appear that the senate desired peace. The Carthaginian envoy who had come to offer prisoners in exchange for money was not admitted to the city and the ransom offer was declined. Every citizen and every ally was made to understand that the war could only end with a Roman victory.

But there was a brighter side to the picture. For all his victories Hannibal was not strong enough to attack Rome itself, while the Roman fleet and events in Spain effectively cut off nearly all aid from Carthage. No Latin city had gone over to Hannibal and the majority of the southern Greek cities remained true to their alliances with Rome, to which faithfulness the presence of Roman garrisons no doubt contributed.

The Roman commanders were now being carefully

chosen — with more of an eye to military ability than to political considerations. The stont defenses of such cities as Neapolis and Casilinum threw a great strain on the weakening forces of the Carthaginians while a check administered to Hannibal by Marcus Marcellus, "the Sword of Rome," in an engagement under the walls of Nola, did much to raise Roman morale.

Meanwhile two Roman generals, the brothers Publius and Gnaeus Scipio, had all but driven the Carthaginians from Spain, and had succeeded in fomenting trouble in Africa, where Syphax, as chieftain of the region of what is now Algiers and Oran, rebelled against Carthage (212 B.C.). So serious did this revolt, aided by Roman officers, become that Hasdrubal Barca, Hannibal's brother, was forced to return from Spain with his best troops.

At about the same time an invasion of Sardinia was beaten off (214 B.C.) and the Roman forces in Sicily were holding their own. Philip of Macedon's effort against the Romans accomplished nothing, but instead involved him in a ten-year struggle with Rome and an alliance of Greek states, in which Rome's Greek allies bore the brunt. Thus despite the crushing defeats which she had suffered, the Romans were not only containing Hannibal in Italy, but Roman legions were on the march in Sicily, Sardinia, and Spain.

The Carthaginians still maintained their great advantage in cavalry. Perhaps the most effective part of this branch were the Numidians, classed as the finest light cavalry of the age. They were by all accounts splendid horsemen, using neither bridles nor reins. They were armed with small bucklers and javelins and were noted for their sudden fierce attacks and speedy withdrawals. It was these troops which had been in great part responsible for the Carthaginian victories. We find the Romans still deficient in this arm, even after six years of war. The defeats and deaths of the two Scipios in Spain (211–212 B.C.) were largely due to the Numidian horse under Massinissa.

Spain had been the source of much of Hannibal's manpower, and it was to Spain that Rome sent a promising young commander, Publius Scipio, the younger, son of the slain general. After much hard fighting (206 B.C.) he managed finally to wrest all Spain from the Carthaginians, though not without allowing Hasdrubal Barca to slip by him with reinforcements for Hannibal.

Hasdrubal Gisco, the Punic general, had by a great effort raised 70,000 foot and 4000 horse (note the small number in proportion to infantry—contrary to usual Carthaginian practice) and 32 elephants. Scipio's force of Romans and Spanish allies, totaled some 45,000 infantry and 3000 cavalry. Both sides encamped at Ilipa, the camps facing each other across a low valley.

For several days Hasdrubal moved out each morning and offered battle, but as often Scipio, after drawing up his forces, declined, whereupon both armies went back into camp (the camps were, of course, fortified, and were presumably too strong to be assaulted by either side). Each day Scipio took care that the Carthaginians moved first, the Romans tardily following suit. He also always placed his legions of Roman soldiers in the center, opposite to the veteran African infantry, while his Spanish allies were on the wings. When he thought that his slowness in forming for battle, and his customary dispositions were firmly fixed in his opponent's mind, he formed his army before daylight and led them to the attack. His cavalry and light infantry assaulted the enemy's outposts and the Carthaginians, half awake and with no morning meal under their belts, had to form battle hastily in order to meet the oncoming Romans.

To Hasdrubal's dismay, daylight revealed that the legions, instead of being in the center were now on the wings, with the light troops and cavalry re-formed behind them. As the lines neared, Scipio advanced his legions obliquely on either wing, keeping his Spanish troops in the center well back. As the Roman legionaries wheeled into line they attacked the wings of Hasdrubal's array, composed of his Spanish levies. As these began to give way, the velites and cavalry swung out again, and sweeping around behind the Carthaginians flank, attacked them in rear. Meanwhile Hasdrubal's best troops, in the center, were "fixed" by Scipio's Spanish, who threatened them but did not close. The Africans were forced to stand idle, while the wings of their army were beaten. Then, assaulted on both flanks, and badly disorganized by their own elephants, who had been stampeded into their ranks by the flank attacks, they began to give way, finally fleeing to their camp.

A sudden downpour hindered the Romans from pressing the attack and during the night Hasdrubal began a retreat. Scipio's cavalry and light infantry caught up with the beaten army, and by incessant attacks, forced the Carthaginians into making numerous halts. This gave Scipio's legionaries time to come up and the battle degenerated into a butchery. Out of over 70,000 men only the Carthaginian general and some 6000 fugitives found safety in the hills. The elder Scipio and his brother Gnaeus were amply avenged.

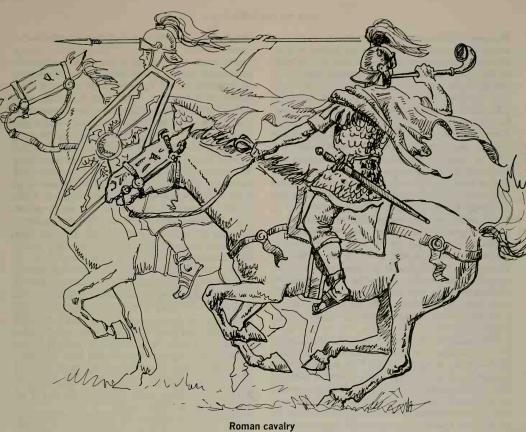
Scipio's surprise change of formation, his double

envelopment of the Carthaginian line, and his refusal of his weak center, all marked him as a brilliant leader. But one of the chief factors in his victory was his appraisal of the dire results of the weakness of the Rome cavalry arm, and his energetic efforts to strengthen it. His cavalry, we are told, was equipped with casque, cuirass, and an oblong buckler; and armed with lance, javelin, and a curved sword. Great attention was paid to drill. Decuriae and turmae were trained to wheel, change front by the flank march of turmae, or by oblique echelon. Emphasis was placed on performing evolutions at speed, at the same time preserving unbroken ranks and proper intervals. Under Scipio's guidance the Roman cavalry arm gained experience and confidence, and both in Spain and Africa amply repaid him for the care which he had lavished on it.

Despite the wastage of battle, the Roman forces at home, afloat, and abroad have been estimated to have amounted at this time to some 200,000 men, about half of whom were Roman citizens. Presumably this included all from seventeen to forty-six, leaving those fields that were safe to be worked to be tilled by slaves, women, old men, and children. The revenues were naturally in sorry state, but nevertheless the Roman's strength was increasing while that of the Carthaginians was on the wane. Syracuse had fallen to Marcus Marcellus in the year 211 B.C., the scientist and mathematician Archimedes losing his life in the sack.

Capua was besieged, despite Hannibal's desperate attempt to draw off the besiegers by a march on Rome. He penetrated to within a couple of miles of the city gates, but withdrew when it became apparent that the troops in the lines before Capua were not to be drawn after him. The fall of that city after a two-year siege created a great impression and was taken as proof throughout Italy that the star of Rome was again in the ascendant. Even the death in an unimportant cavalry skirmish (the cavalry again) of the veteran Marcus Marcellus and his fellow consul Crispinius (208 B.C.) did not check the decline of Hannibal's power.

The news that Hasdrubal Barca had crossed the Pyrenees was cause for a further great effort and a total of twenty-three legions was called to arms. Before they could block the outlets of the Alpine passes Hasdrubal was in Italy, and after an indecisive engagement with the Consul Nero, Hannibal marched north to effect a junction with his brother, finally encamping at Canusium. Nero followed and camped nearby, with some 40,000 infantry and 2500 horse, in observation of the enemy. An intercepted dispatch



from Hasdrubal informed the Roman of his route south. The Roman forces facing Hasdrubal were not strong enough to risk a battle and Nero conceived the daring plan of marching secretly north with part of his army, and joining the northern army, under Livius—if possible without Hasdrubal becoming aware of the augmentation of the force on his front.

Nero sent the captured letters to Rome, as explanation to the senate – for the move he was making was contrary to the law which forbade a consul marching his army beyond the limits of the area assigned to him. He also advised the senate to send the two legions on garrison duty at Rome to a pass which they could hold in case Hasdrubal marched unexpectedly on Rome. Taking 7000 picked troops, a thousand of them cavalry, Nero rapidly moved north. Supplies were ready by the roadside, arranged for by messengers sent on ahead, and many volunteers,

veterans of former campaigns, joined him en route. The last stage of the march was timed so that the reinforcements under Nero entered the Roman camp at night-the men being received quietly into the tents of the northern army. This was successfully accomplished, but when both forces drew up in battle array Hasdrubal is said to have noticed some increase in the Roman ranks and also to have detected by extra trumpet calls in the Roman camp and the rusty armor and worn-looking horses that the northern army had been re-enforced in the night. Not feeling strong enough to engage both consuls he retired to his camp and that night attempted to retreat northward, toward Metaurus. His guides betrayed him and daylight found him with the river still uncrossed and the Romans approaching (207 B.C.).

For once the Carthaginians appear to have lacked their usual superiority in cavalry. Hasdrubal drew up his army with his veteran Spanish and African infantry on his right, with his ten elephants in front. His left, in broken ground, was held by his Gallic auxiliaries. Livius attacked the Spanish mercenaries and the battle there was bloody and indecisive until Nero withdrew part of his forces on the Roman right (the Gauls seem to have taken no very active part in the battle) and swung them across the rear of the Roman army to attack the Carthaginian right. Taken in flank, the Spanish and African troops were rolled back in disorder and overwhelmed. Those of the Gauls who failed to escape were cut to pieces. Hasdrubal, seeing the battle lost, spurred into the Roman ranks and perished sword in hand. The victory was complete. Polybius gives the Carthaginian dead as 10,000 and assuming 30,000 as Hasdrubal's total force, we can figure another 10,000 as prisoners, with the fugitive Gauls making up the balance.

Nero, anxious to return to the main part of his army before Hannibal noted his absence and attacked, started on his return march the same night. He reached his camp, 250 miles away, in six days. The first news Hannibal had of his brother's defeat was when Hasdrubal's head was thrown over the ramparts

of his camp.

The battle of the Metaurus was a turning point in the war (Creasy lists it among his Fifteen Decisive Battles of the World) and one from which the Carthaginians never fully recovered. Hannibal retreated into Calabria, where he managed to maintain himself for four more years, until recalled to Africa to meet the threat of Roman invasion. Scipio, fresh from his triumphs in Spain, was made consul and in 205 B.C. proposed to lead an army into Africa. The fact that Hannibal was still in Italy caused some doubts, but the project was approved and in 204 he landed in Africa with not more than 30,000 men. Two of his legions were survivors of Cannae who had been serving in Sicily ever since, in semi-disgrace. Recruits raised them to a strength of 6500 each. They were tried veterans, and grateful for an opportunity to rehabilitate themselves.

Scipio's successful campaign caused the peace party in Carthage, always a strong one, to seek an armistice. But the patriots finally prevailed, and Hannibal was sent for. He arrived in Africa (203 B.C.) after an absence of thirty-six years and began the task of assembling an army. Massinissa, Carthage's old ally, had been set aside by the Carthaginians in a quarrel with a rival prince and had gone over to the Romans. Then his rival was captured by Scipio's troops, and Massinissa was made king of all Numidia. His presence at Zama with 6000 horses and 4000 infantry gave Scipio

superiority in cavalry and contributed to the Roman victory.

The battle of Zama (202 B.C.) was the final act in the long drama. Hannibal's forces were probably in excess of 50,000; those of Scipio possibly about 36,000, including the 10,000 Numidians. Hannibal formed his infantry in three lines, his veterans from Italy in the third line as a reserve. He had eighty elephants, and these he distributed along his front. His cavalry he placed on his wings. Scipio stationed his two veteran legions in his center (and presumably an equal number of Italian allies), his Roman cavalry on his left, and Massinissa and his Numidians on his right. In deference to the eighty elephants Scipio made a change in the customary position of the maniples, instead of the second line, the principes, covering the intervals of the hastati, the three maniples were arranged one behind the other, leaving lanes a maniple wide through their formation.

The action started with the customary skirmishing of light troops, after which Hannibal ordered his elephants forward. This advance was met from the Roman side with blasts of trumpets, which so terrified some reluctant pachyderms that they ran back, trampling their own lines. The others, after causing some damage to Scipio's skirmishers, ran down the lanes between the maniples rather than face the sharp spears and waving swords of the solid blocks of heavy infantry. Assaulted by volleys of javelins, the poor beasts kept on going, rushing out into the rear of the Roman array and so to safety.

The Roman and Numidian cavalry took advantage of the confusion to charge the bodies of horse on Hannibal's wings, and drove them off the field. Meanwhile the infantry had been approaching each other and the first lines engaged. After a stiff fight the Romans beat back the Gauls and Ligurians who made up the first division of Hannibal's army. The Carthaginians in the second line did not move up promptly to their supports, preferring to keep their own ranks intact. The Gauls and Ligurians finally broke and ran, dispersing as best they could, around the flanks. Their comrades in the second line held their spears steady and would not allow the fugitives to break into their ranks.

The combat between the hastati and the Carthaginians was a grim one, and the fresh Carthaginians at first pressed the weary hastati back. The principes moved swiftly in to their aid and this addition of fresh troops proved too much for the Carthaginians, who made a valiant stand but were gradually overwhelmed.

In their turn they broke back toward the bristling spears of Hannibal's "Old Guard," veterans of the Italian campaign, and devoted to their leader. These tough professionals, perhaps some 24,000 strong, kept their lines unbroken, unmoved by the plight of the fleeing Carthaginians. They had been held well back of the other two lines, and now, fresh and unshaken, they awaited the coming shock with the calm detachment of the veteran soldier.

The Romans had now to fight what amounted to a new battle with an enemy who must have outnumbered them by several thousand. Of their own number only one-fifth had not been previously committed, while many of the troops with whom they were about to engage were the men of the Trebbia and Cannae, equal to the best that Rome could produce. With what emotions the Romans faced the men who had beaten them so decisively so many years before we do not know. The feeling uppermost in their minds was probably one of fierce determination to avenge their past defeat. They were fighting under the eye of a victorious commander, and had already routed two divisions so that, even if battle-weary, their morale was high.

Scipio now proved that their discipline was as superb as their spirit. Halting his men within a few hundred feet of the enemy, he reorganized his ranks, bringing the maniples of principes and triarii up into line with the hastati, thus gaining the maximum amount of missile power for the final shock, and at the same time extending his front until it matched or overlapped the superior numbers of Hannibal's formation. The steadiness of the troops, required to take up a novel formation in the heat of battle, with the enemy within arrow-flight, was matched only by the coolness of their commander. The ordering of such a move at such a time was proof of Scipio's flexibility as well as his daring. Everything now depended on the valor of his already sorely tried infantry, and the speedy return of his victorious cavalry. For the thinned Roman line had to hold the heavier masses of Hannibal's veterans until the cavalry could break off the pursuit of the fleeing Carthaginian horse.

With a crash the opposing lines met, and in a moment the legions and Hannibal's phalanx were locked in combat. "The numbers," Polybius wrote, "the resolution, the arms of the two sides were equal, and they fought with such obstinacy that they died in the ranks where they fought, and no one could judge which would have the advantage." At the crisis of the battle the Roman cavalry and their Numidian allies returned and fell upon the rear of the Punic phalanx. Assailed in front by the fury of the legion-

aries, and with the swords and lances of the enemy cavalry at their backs, Hannibal's veterans sold their lives as dearly as they could. Most preferred to die where they stood. Some few finally sought safety in flight but their erstwhile allies, whose brilliant charges had won them so many fields, now pursued them with unrelenting savagery and few escaped. Hannibal managed to make his way from the stricken field, but Carthage had lost the last of her armies and the war was over. Scipio moved immediately upon the city, and peace on Roman terms was accepted.

So ended the sixteen-year struggle. It had tried the Romans as few people have been tried. A sizable percentage of her male population had perished, her countryside and that of her allies had been devastated, and her trade disrupted. But each new disaster had been met with indomitable courage and unshaken will. The people as a whole had shown the same fierce determination as had the legionaries. No sacrifice seemed too great, and the greatness of the Roman character never showed to better advantage than in this most perilous period of her history.

The end for Carthage was not yet. Although shorn of her political and military power, her trade revived sufficiently to again awaken the enmity of the Roman people. Whether from jealousy of her growing commercial prosperity, or from genuine apprehension that she might at some future date challenge Rome once more for dominion of the Mediterranean, her destruction was decided upon. The grim ending to all Cato's speeches in the senate, "delenda est Carthago," was hardly necessary. Rome could brook no rival in the Western seas, and the African city was doomed.

Provocation after provocation was offered, and demand followed demand. At last the frantic Carthaginians reached a point beyond which they could not yield. In a vain hope of appeasing their oppressors they had surrendered all their arms—among them 3000 catapults and 200,000 sets of armor. They were then informed that their city was to be torn down, but that they might settle elsewhere, as long as they kept at least ten miles from the sea! The reaction to these harsh demands was a hysterical outburst of patriotism. Public buildings were torn down to obtain timber and metal, the women cut off their hair to plait into strings for the new catapults, and citizens of all ages and both sexes toiled to repair the defenses and manufacture weapons and armor.

If, in Hannibal's struggles with the young republic, our sympathies lie with Rome, we must transfer them to Carthage in her last extremity. She was without allies, warships, or weapons: yet she chose to fight, and so well did her citizens defend her massive walls

that it was three years before the Romans finally forced their way into the city. Even then the inhabitants defended themselves desperately, and forced the legionaries to take the city street by street and house by house. Some 55,000 inhabitants survived to be sold as slaves, out of a population estimated at well over half a million. The city was completely destroyed (146 B.C.), the site plowed over, and a solemn curse invoked on any who should attempt to rebuild it. So Rome's great rival ended—as did most of Rome's enemies, in blood and flame.

The Marian Legions

In the century preceding the downfall of the Republic and the beginning of the Empire the character of the Roman state, of the Roman people, and of the Roman army underwent profound changes. The city-state had now become a world power. Where before her rule extended over some allied cities and colonies in Italy itself, now she held subject lands across the sea. Her trade was enormous, and the tribute from the conquered peoples immense. Each new victory brought fresh hordes of slaves to swell the already glutted markets - and under pressure from the competition of slave-run estates and plantations the small farmer, who had been the backbone of the state, was fast disappearing. Pliny might well write that it was the large estates which destroyed Italy. The newly-rich capitalist class and the dwindling ranks of the patricians joined hands to keep the proletariat in submission. And demagogic rabble-rousers used every trick to sway the masses of citizenry.

Politics were unbelievably foul—corruption, graft, and murder was a commonplace weapon of political power, while the best features of the Roman character seemed drowned in greed, class hatred, and blood.

The republic was obviously doomed, yet so strong were the democratic traditions, even in those corrupt times, that it lingered on; through political massacres, civil wars, slave uprisings on a gigantic scale, and all the other horrors which accompanied the death-struggle of a once-splendid institution. It was obvious that the burgher-soldier had no place in the Rome of the Gracchi, Marius, and Sulla. Service to the state had ceased to be an honor and had become instead a burden. The bearing of arms was becoming more and more a long-term occupation for the professional. Caius Marius was a skillful soldier who had won fame as the conqueror of Jugurtha, would-be king of Nu-

midia. Rome turned to him as the one commander who could save the city from a new and pressing danger, greater than any which had threatened since the days of Hannibal. Two nations of barbarians, the Cimbri and Teutones, both probably of Germanic origin, were gathered on the northern slopes of the Alps and seemed poised for a descent on Italy. Like all such nations on the march they came with their wagonhomes, wives, children, and cattle; to seek lands and incidental plunder. And like most such migrants, they came in overwhelming force. The number of their fighting men was said to have totaled 300,000. They overran Gaul and defeated army after army of Romans, and finally dealt the most crushing blow of all, by annihilating at Arausio, on the lower Rhone (105 B.C.) two consular armies of 80,000 men, of whom it is said only ten men escaped. This defeat, comparable to the disaster of Cannae, caused panic in Italy. Romans recalled the sack of the city by the Gauls in ancient times, and frantic efforts were made to scrape up recruits for the depleted ranks of the legions. Fortunately the barbarians granted a breathing spell by marching across the Pyrenees, where they spent three years in battling with the fierce tribesmen of northern Spain.

Marius put the time to good use. The old militia system, well as it had served the republic in its early days, was no longer suited to the needs of the moment. The last traces of it had almost vanished on the field at Arausio. A new army had to be raised and it was to be an army of professionals - long-term men enlisted with no restrictions as to birth or property. The three divisions of the heavy infantry; hastati, principes, and triarii, were done away with, although the names remained, and all were armed alike. The maniple had been too small for separate action and those of different classes were not interchangeable. Now that the differences between the three classes had vanished, maniples could be combined into a group, strong enough to be used independently, if necessary, and yet small enough to be easily handled within the legionary organization. Such a tactical unit was the cohort, and the Marian, or cohort legion, became the standard fighting unit of the Roman army. It consisted of ten cohorts, each of three maniples. The cohorts were interchangeable - all of equal fighting value, although the maniples still kept the old designations. The maniple was divided into two centuries, or ordines, and was commanded by two centurions. The senior centurion commanded the cohort.

The battle line did not now necessarily consist of three lines, but the cohorts might be so arranged, or in two lines, or even in one. The new formation was more flexible than the old and far less complicated to handle. The numbers varied, but the average Marian legion at full strength might be estimated at 6000, divided into ten cohorts of 600 men. With the legions on a permanent basis they came to be numbered, which practice obtained until the fall of the Empire. Drill was standardized and lanista, or drill masters, were brought in from gladiatorial schools to instruct the troops. Marius also made some changes in equipment and the internal arrangements of the units. He is said to have made an improvement on the pilum, and more or less standardized the loads carried by the soldier - Marius' Mules as they ruefully called themselves. The forked stick on which the legions carried their gear is said to be an innovation of his.

The Marian legions (with which, by the way, he literally obliterated the two nations of the Cimbri and Teutones—those not killed in battle or killing themselves were sold as slaves) were so close to those of Caesar's time that we may consider them from our standpoint as one. There follows, then, a description of the Roman soldier as he was under his most famous commander.

The legion was now a standardized unit, made up of smaller standardized, and therefore interchangeable, units. True, distinction was made by individual commanders between legions with more or less experience, and a newly raised unit would not be counted as of the same worth as a veteran outfit. Caesar was particularly aware of the value of veteran troops. In the Commentary on the campaign of 51 B.C. it may be noted that he makes considerable distinction between veteran legions and one made up of very promising material, but with only eight campaigns to its credit! Caesar's favorite, to be called upon when a difficult and dangerous job was to be done was his old reliable Tenth legion. Because the units within the legions were interchangeable we often find cohorts, or numbers of cohorts, being detached for special duty, or added temporarily to another legion as extra support.

The six tribunes, who were originally required to have had some experience in the ranks, were appointed from Rome, by the consul or proconsul. They were always selected from the patrician families or those of the knights, and by Caesar's time the appointments were mainly for political reasons. This was certainly not the most efficient method, but a parallel can be drawn in more modern times. For instance, the British army was officered by influence and purchase from among the gentry, the higher grades being filled by aristocrats, usually very young (Wel-

lington, for instance, was a lieutenant colonel at twenty-four).

The six were paired off, and each pair commanded for two months, alternating on duty day by day. The four not on duty were often detached on other missions—escort duty, gathering supplies, etc. They were mounted, as were infantry officers of field grade up to recent times.

Without replacing the tribunes, an improvement had been made, in the interests of efficiency, by creating the post of legatus. Men of high rank, their duties as deputies to the general at first seem to have been advisory, but later, they actually commanded the legions.

The real leadership of the legion was, as before, in the hands of the sixty centurions. The old (and now meaningless) terms of hastati, principes, and triarii (or pilani, as they were often designated) were still retained to designate the maniples in the cohort. Of the six centurions in the cohort, the senior centurion of the first maniple was called pilus prior, the junior, pilus posterior. Those of the second and third maniples were designated principes prior, principes posterior, hastatus prior, and hastatus posterior respectively. The primus pilus was at the head of the cohort, unless a tribune was placed in command. The old formation of Scipio Africanus' time had changed in that the younger and less experienced were now in rear of the formation, and the maniple with the largest number of veterans (which in olden times would have been the triarii or pilani) were now in

The cohorts were numbered from one to ten, the first being considered the senior. The centurions were so designated, the lowest-ranking centurion in the legion being known as *decimus hastatus posterior*. The highest was *primus pilus prior* or more simply *primipilus*, and this officer, to all intents and purposes, ran the legion.

The maniple was divided into two *ordines*. The *ordo*, or half maniple (they were sometimes, but very rarely, referred to as *centuria*) corresponded more or less to the platoon of modern times.

Each cohort had a standard (signum) and its bearer was known as signifer. The signum was often in the shape of an animal mounted on a staff. The standard of the legion was the eagle (aquila) and the eagle bearer the aquilifer. The eagle was entrusted to the first, or senior cohort. The cavalry and light troops carried a vexillum — a small banner fixed to a short bar mounted horizontally on the end of a staff. The vexillum was also used as a general's standard.

The Romans used three types of horns for signaling and giving orders. These were the bugle or *buc*ina, the *cornu*, so called because it was made of orn with a long metal mouthpiece, and the *lituus* r trumpet. This last was used by the cavalry.

The Legions of Caesar

The legion in Caesar's time seems always to have been onsiderably under the 6000 of the Marian units—lthough it is doubtful if even these were ever up to all strength. It has been estimated that the average ffective strength of the legions during Caesar's camaigns was from 3000 to 3600 men. Others have estimated the full strength legion to have numbered 800. Legionary cavalry had been done away with the attached horse was provided by auxiliaries, on-citizen members of subject races. Of these many of the heavy cavalry were from Thessaly, while sumidians served in the light horse. By this time, of ourse, the socii had received the franchise and had become part of the legionary infantry.

As mentioned above, the practice of numbering the egions began in the last years of the republic. The umbers were probably given according to the seiority of the unit. A legion might disappear from the st or broken up and be reconstructed in later years. uch was the fate of Legio XIV. For some reason it was broken up and the men of five of the cohorts sed to bring other legions up to strength. Five cohorts were attached to the ill-starred Legio XV. Students f the Gallic war may recall that this legion, under abinus, was tricked into leaving its camp and, along with the five cohorts from Legio XIV, was annihilated. Next year a new legion was raised and given the umber XIV.

The casual reader of later Roman history may be serplexed by the fact that occasionally more than ne legion bore the same number. The reason is that when Augustus became emperor at the end of the ivil war, he found himself heir to three armies; his wn, that of Lepidus, and that of Mark Anthony's. When choosing which legions to retain in the new mperial army, he picked some which had been identically numbered in the three old armies and allowed them to keep the same designation. Thus there were hree legions bearing the numbers III and two numbered IV, V, VI, and X. As the legions also had names Legio II, Adiutrix; III, Gallica etc.) these were used o distinguish those with the same number.

The long-term professional who made up the army of the last days of the republic was a very different type of man from the citizen-soldier of the old days. His worth as compared to the older type is hard to assess. His professional ability; drill, handling of weapons and powers of endurance were undoubtedly higher, but mentally and morally he was not of the same calibre. He came as a rule from a lower class, and the profession of soldiering in the ranks did not attract the best characters (true as late as the beginning of the twentieth century). While still a citizen, as a soldier he no longer identified himself with the solid burghers of Rome. A good example of this is found in the Commentaries. On one occasion the legions mutinied and demanded their discharge. In the course of a harangue, Caesar granted their demands, addressing them as Quirites. The title "citizen" would have been looked upon as a mark of honor by the legionaries of earlier days, but to Caesar's men it was a term of reproof, an insult to their status as professionals. The "disgrace" implied in the title had its effect, and the legions returned to their duty.

The discipline of the legions was now imposed from above, not from within. Punishments were brutal and the soldier was taught to fear his officers more than the enemy. Yet the discipline itself was not of the best-at least by modern standards. Caesar's Commentaries are full of incidents of indiscipline and sometimes panic, though, to be fair, these last nearly always occurred with "green" troops. There are numerous examples of troops leaving formation to plunder, and also stopping to pillage when they should have been following up an attack. Caesar's reprimand after the defeat at Gergovia is a good example. "I called a meeting of the soldiers," he wrote, "and reprimanded them for the overeagerness and lack of restraint which they had shown in having ventured to decide for themselves where they ought to go and what they ought to do, in failing to halt when the signal for retreat was given, and in disobeying the orders of their generals and officers." In the preceding action a centurion (who should have known better) "had, as we found out later, told his men that he had his eye on the sort of reward I had given at Bourges [for the assault of which town Caesar had offered prizes for those who first scaled the walls and that he was not going to let anyone scale the wall before he did." As the assault had not been ordered and retreat had been blown the centurion's action does not speak well of his legion's (VIII) discipline. Nor does the offering of rewards for doing what should be any soldier's duty.

The trouble was that the legionary had come to



owe his allegiance to his commanding general rather than to the state. And the generals, who never knew, in those days of civil unrest, when they might need a loyal army at their backs, either for personal safety or political aggrandizement, sought by every means to bind their soldiers to them. Patriotism could hardly serve as a motive and so donatives, privileges, and promises of booty were substituted; the only kind of reward the mercenary soldier could appreciate. Furthermore, in order to attach their soldiers to them, commanders often allowed them more license than good discipline would normally allow, and robbery and violence toward the civilian population of occupied territory were often permitted or winked at. Soldiers were sometimes granted all the plunder in a captured camp or town. They were also at times allowed to dispose of the captives and it is to be supposed that many of the civilians who followed the legions, like vultures following a beast of prey, were slave dealers. Caesar writes, after the defeat of a Gallic tribe, "I sold the whole population of the place at auction at one lot. The purchaser reported that the total number of persons sold came to 53,000." After the surrender of Vercingetorix at Alesia the prisoners were distributed among the whole army, each man getting one Gaul.

The above is not intended to give the impression that the new legionary was a poor soldier. He may have lacked the moral worth of his predecessors, but all things considered, he was skillful, brave, usually obedient, and, for his time, exceedingly well disciplined. He occasionally knew defeat, but had sense enough to realize that such setbacks were part of soldiering and that, while such and such legions may have received a severe drubbing, the Roman army as a whole was unbeatable. His arms and equipment were well suited to his mode of fighting, and to that of his usual opponents. He was as appreciative of good leadership as any soldier in any age, and capable of serving his chosen general with devotion. Of his feeling toward his legion there can be no doubt. In most cases the legion was his home and family; and the eagle and the standard of his cohort his household gods. Thus morally equipped with devotion to unit, comrades, and commander, and with the knowledge that he was a highly trained part of an age-old and invincible institution, there was little he would not dare, and little he could not do.

Of the physical appearance of Caesar's troops we know very little. Caesar mentions their small stature and contemporary writers always make a point of emphasizing the great size of the Germans. We know that the average size of the Western races have increased greatly in the last seventy-five years (in the 1880s the height requirements in the U. S. Army called for a minimum of 5'4" and a maximum of 5' 10"). By present-day standards, then, the legionary may have seemed small indeed. But what he lacked in height he must have made up in muscle, for the fighting drill of the time called for great physical exertion, and on top of that, the soldier of the legions was a prodigious marcher and worker.

The legionaries' arms and equipment were practically standardized by Caesar's time, although there may have been very minor differences due to the fact that they were made at several factories in different places in the Roman world, and that each depot undoubtedly produced its own type. Repairs were made by the armorers attached to each legion.

The legionary wore a short-sleeved woolen tunic reaching to mid-thigh. Soldiers of a later date are always shown wearing tight-fitting trousers (braccae) but whether these had been adopted in Caesar's time we do not know. As his campaigns called for wintering his troops in a fairly cold climate, it is possible that warmer clothing had been adopted, and that the braccae were the adaptation of the long trousers of the Gauls.

The helmet was made in several types, but the legions were almost universally equipped with the familiar cassis, a close-fitting visorless helment of iron or bronze with a sloping neckpiece at the back and hinged check pieces which tied under the chin. A small crest was worn and was probably, at some later date, made removable for carrying and only used for parade or in battle. The helmets of the Empire often show only a knob or small ring. Forestier in his The Roman Soldier states that the centurion wore a crest, but wore it in a transverse position—"athwartship."

The body armor was usually the lorica segmentata. This was a leather or linen jacket, upon which was sewn a series of metal bands, hinged at the back and fastened in front with clasps. These reached from under the arms to the hips. Over each shoulder was fastened a shoulder piece made up of three or four plates, the ends of which were fastened to the cuirass. Below this cuirass, leather straps hung down like a kilt almost to the bottom of the tunic. The short Iberic sword was sometimes slung at the right hip by a strap over the left shoulder, but more often it was hung from the cingulum militare, a long belt which passed twice around the hips, having the sword on its right and the short broad dagger or parazonium on the left. From the bottom of this belt there hung a little apron of leather strips, usually studded with metal.

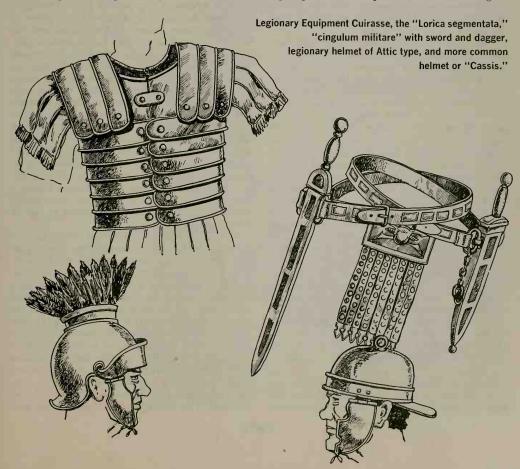
The shield, or scutum, was oblong, about four feet

high by two or two and a half broad and deeply eurved. It was made of wood, covered with leather and with an edging of iron. In the center was a boss and within the border was the insignia of the legion, painted on, or made of metal and riveted in place. Presumably to protect this insignia, the shields were covered when on the march or in camp.

There is some question whether greaves were still worn at this time. Some say greaves were worn on both legs—some say on the right only (the foremost leg when fighting and so the most exposed). Others state that no greaves were worn at all, and others that greaves were worn only by centurions. Hobnailed sandals protected the feet, and a long woolen cloak served as overcoat and blanket.

Besides arms and armor the fully equipped foot soldier or "impeditus" carried his own personal gear, spare elothing, etc., a few days' grain ration, an eating and cooking vessel and presumably some sort of water bottle or canteen. Besides this, the legionaries carried entrenching tools, axes, saws, baskets (for carrying earth), and sickles for gathering grain. All this, plus pilum and shield, mounted up to a good-sized load. Cicero gives the weight as 60 lbs., without arms and armor, and experts have put the weight as high as 80 lbs. The gear and personal baggage was packed in a bundle and carried over the shoulder on the end of a pole forked at the top. Before going into action, baggage was piled, shields uncovered, helmets put on and weapons readied.

Heavy baggage (impedimenta) was usually carried by pack mules or horses—sometimes in wagons. Tents were of leather: one to every ten men. There would also be tents for the centurions and for the tribunes; both undoubtedly had servants. There would also be armorer's tools, portable hand mills, food, and a host of things necessary to keep a legion in the field. Figuring 200 lbs. to a pack-animal, which is a good



load, it is hard to see how a legion could have had fewer than five hundred animals, and possibly had more.

The legionary's pay was 225 denarii a year. This was about the same as that of a day laborer. Rations and clothing were deducted, but chances for booty were usually good, and most commanders added gifts and bonuses. The staple food was grain. The amount issued has been variously stated as being from one to three pecks a month. Even the maximum estimate, which amounts to one and one-half cups of grain per day (about 1200 calories) does not seem a princely amount of food on which to conquer half a world, but this basic ration was supplemented by beef (on the hoof), and whatever in the way of fruits, vegetables, and other edibles which the foragers could bring in. Wherever possible, a market was set up outside the camp and the local farmers encouraged to bring in produce. Among the numerous camp followers who accompanied the legions there were sutlers, who sold, along with other things, food and wine.

Besides the legions there were considerable numbers of auxiliaries who were raised from the subject peoples or allied states. They were not citizens. Besides furnishing the cavalry they also provided the light-armed troops — who were usually equipped with helmet, light spear or javelins (not the pilum), sword, and an oval shield. These troops usually wore no armor, but were clad in leather jerkins. Besides these velites there were bowmen, often from Crete, and slingers, many of them from the Balearic Islands.

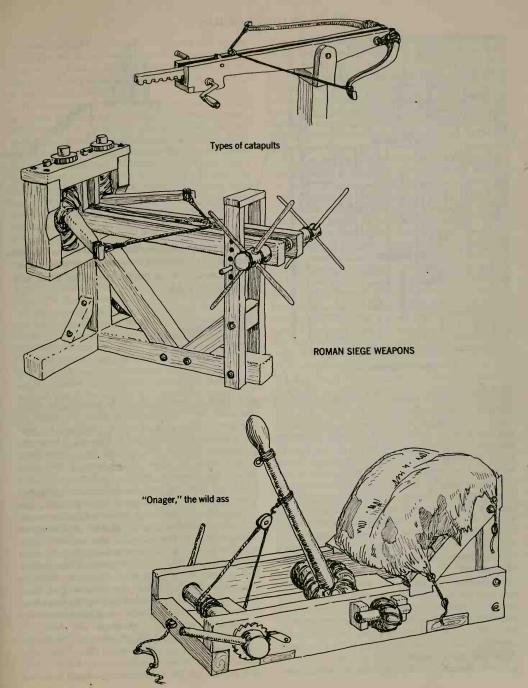
The Gauls themselves furnished much of the cavalry. Caesar's policy of playing one tribe off against another helped in this, and thanks to the natural jealousies and hatreds among the various nations, he seldom lacked horsemen. German cavalry were much esteemed and these warriors, who had a great reputation for size and ferocity, were often invited across the Rhine by both Roman and Gaul. Most of these Gallic and German contingents were raised and led by their chiefs for a specific campaign, and when the legions went into winter quarters they scattered to their homes. There were some who seemed to have remained permanently with the Romans, and these were probably better organized than the majority of auxiliary cavalry. The "regular" auxiliaries, from the nations long subject to Rome would, of course, be organized in the approved manner, in alae, turmae, and decuriae.

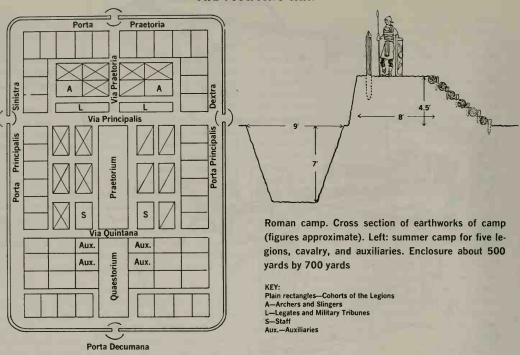
Besides the fighting men of the legion, there were numerous men attached to the administrative and other branches. There was the *quaestor*, who not only looked after the finances but also food, clothing, arms, equipment, and shelter. He took the place of adjutant general and quartermaster general of later times. How large his staff was is not known, but it must have been considerable.

There was a group of young men, volunteers, attached to the general as attendants and unofficial staff officers to learn the art of war. Probably many of these voluntarii would be sons of friends and relations. The rest of the general's staff consisted of secretaries, scribes, lictors, and servants. There were also scouts, the speculatores, some ten of whom were assigned to each legion, and whose duties were to act as advance guard and flankers, much as did the scouts employed by the U. S. Army in its campaigns in the West.

The general had a small bodyguard, used as a personal escort, and often formed of barbarians; the idea presumably being that such men, foreigners, would have no interest in any possible political intrigues, and would be completely attached to the person of the general alone. Besides the escort there were the evocati - a classification which has no modern counterpart. They were veterans, centurions and privates who had completed their service, and had either remained with the army or been requested to return from retirement by the general. They enjoyed great privileges, and had riding horses as well as pack animals. At the same time they were in touch with, and had great influence over, the rank and file. In an era when personal popularity with his army was essential to the success, and even survival, of a leader who aspired to political power, they must have been invaluable. Being mounted they could be used as orderlies, messengers, or scouts. In battle they formed a sort of second bodyguard, and were often accompanied by such of the young voluntarii as had no other duties.

The Roman soldier performed the manual labor of fortifying, bridge-building, constructing winter quarters, and the often elaborate erections which accompanied siege operations. However, there were attached to each legion a body of engineers under a praefectus fabrum. This chief engineer was attached to the staff, and his corps of assistants directed the efforts of the legionaries. For special work we are told that fabri were called from the ranks, which must have contained many men expert in different fields of construction work. It is possible that the armorers came under the command of the engineer department. It is believed that the artillery, which in many cases accompanied the legion, was also manned from the ranks of the legionaries. If so there were probably





trained artillerists in charge of the larger pieces who directed the men detailed from the ranks, and who were also expert in the construction, maintenance, and repair of the weapons. The weapons themselves were not very complicated, and were mainly of wood. While we know that some were transported, traveling with the legions or with a siege train, it was entirely possible for the artillerists and engineers to have manufactured some of the larger weapons on the spot. The iron work might have been brought along with the baggage, but the wooden frames, etc. could well have been hewn, squared, and put together where needed. It is also likely that some of the large siege engines were transported in knock-down form and reassembled.

The artillery was not for use in the field, in the way it is used today. Some form of catapult was the only one at all suited, by weight, size, and velocity of projectile, to use in battle. But the comparatively short range, the slowness of loading, and the fact that one dart might only kill or disable one or two men precluded its actual use in action.

It was, however, used in quantity for the defense

and attack of fortified places. In general, the weapons used were very similar to those developed by the Greeks. They were of various types and for various purposes. Caesar referred to them all as tormenta, presumably because they derived their power from twisted ropes or sinews. They were of two main classes, the catapultae, which shot large arrows in a horizontal direction, and the ballistae, which threw heavy projectiles at a comparatively high angle. The larger ballistae could throw stones weighing a couple of hundred pounds or more, and were used to smash down walls and towers, while the smaller variety were used more as antipersonnel weapons, as were the catapultae. With the exception of the ballista known from the violence of its "kick," or recoil, as the onager, the "wild ass," the tormenta had three main parts: the stand or frame holding the propulsive force, a track and slide for the missile and the means of drawing, cocking, and releasing.

Perhaps one of the striking features of the Roman soldier was his capacity for work. His ability with sword and *pilum* was equaled only by his skill with pick and shovel. He needed no pipe-claved belts and

breeches, or boots and brass to keep him out of mischief. For the Roman army believed in a good night's rest, secure from war's alarms; and as soon as the day's march was ended all hands turned to, to fortify a camp for the night.

The Roman camp was a work of art and it is hard to realize that each and every encampment, in enemy territory or in peaceful province, was ditched, walled, and stockaded before the troops settled down for their evening meal. The site for the camp was carefully chosen and wherever possible the day's march must have been so regulated as to lead the legions to a selected ground. When possible the camp was on the top of a rise, because in the days of spear and sword a favorable slope meant a great deal in the way of advantage both of missile throwing and impact of attack. Then too, it had to be near water, and of course, much wood was needed, both for cooking and to furnish palisades, etc. On the other hand, it was not desirable that thick forest cover the ground too close to the walls, to give a possible enemy chance to mass unseen for a surprise attack.

A camp party went ahead to choose the ground and stake it out, so that no time need be lost when the legions came up. As the troops arrived they were marched to their appointed places (these were always the same) baggage was laid down, guard details told off, and arms (except swords) piled. The cavalry served as outposts while the legionaries worked, but if the enemy was close and attack imminent, then one, or if necessary, two maniples from each cohort guarded the workers.

The camp was laid out in the form of a rectangle, with rounded corners for easier defense. The ditch varied, but on the average it was some seven feet in depth and nine feet wide. The earth thrown up formed the wall. This provided a platform from which the defense was conducted, so that it must have been about six feet wide at the top, enough room for a man to move backward and forward sufficiently to throw javelins. To keep the wall in place it was faced with sods and brush. On top of this earth rampart a palisades of stakes was planted, low enough so that a man could easily hurl his javelins over it. The back of the wall was cut into steps, or fascines were staked to it, to give easy access to the top. There were at least four gates or openings, protected by a traverse, and very probably a second traverse on the inside. The width was very likely as wide as a maniple (40 feet) as it was essential that troops be able to issue swiftly and ready to form into line of battle.

The man-hours necessary to move the required amount of earth (about 45 cubic feet per foot of wallfront) has been carefully estimated and allowing for reliefs, parties for gathering materials, etc. it has been shown that a camp could have been fortified, complete with palisade, in four hours. From a dawn start (the Romans habitually began their day before sump) to noon, at their regular marching step (a hundred steps to the minute) and allowing for rests, they would cover some seventeen or eighteen miles. This allowed ample time to fortify, put up tents and settle down before dark.

When camps were to be more or less permanent during a siege, for instance, or when troops were to operate in the vicinity of their camps for several days -the fortifications were more elaborate. The walls were made wider, to give room for wooden towers which were placed at intervals, and to allow siege engines to be mounted. In these cases ditches were often deeper and walls higher, as well as wider. At Caesar's camps, when engaged against the Bellovaci, two ditches were dug, each 15 feet wide; the rampart 12 feet high and towers three stories high were built at intervals along it. These towers were connected by galleries, which were protected in front by wicker breastworks. Thus the defense was in two tiers, the men of the wall being partially protected from missiles with a high trajectory by the galleries overhead, while the men on these galleries were able to throw their weapons farther, and with greater force. The openings were fitted with gates (obviously unusual, or Caesar would not have mentioned it) and were flanked with towers taller than the others. The advantage of such a camp was that it could be safely held with fewer men. It was the custom to leave the less experienced men to hold the camp while the veterans carried out their operations nearby. The Romans always built their camps as close to the scene of action as possible and used them as a secure point from which to launch an attack, or as a place of refuge and a rallying spot in case of a reverse. They were as much a part of the Roman system of war as the slittrench and fortified post of today.

The size of the camp was in proportion to the number of troops. A cohort, with the tents of its three maniples set up in three double rows, back to back, with company streets between, took up an area 180 by 120 feet. A broad street perhaps 120 feet wide circled the camp inside the walls (Polybius says 200 feet, Hyginus says 60). This street allowed room for defending troops to maneuver and prevented missiles from over the wall reaching the tents. The main streets, the Via Principalis and Via Quintana, were also broad, perhaps 60 or 100 feet wide. The large camp shown in the plan (from Judson's Caesar's

Army) is for five legions, with auxiliaries and cavalry. Such a camp would be over 700 yards by 500 yards—and would entail moving some 15,000 cubic yards of earth for ditches and wall besides the labor of clearing the ground, cutting logs for the palisade, etc. That a camp like this was built every afternoon after the day's march says much for the energy and discipline of the legions.

One of the gates, the *porta praetoria*, faced the enemy, or the direction of the next day's march. The *praetorium* held the headquarter's tents, the altars, and the tribunal. The *quaestorium* contained the headquarters of the administrative staff, forage, booty, prisoners, and hostages. The baggage animals were also stationed inside, on either side of the *praetorium*. The camp was always laid out in the same general pattern, whether for one legion or half a dozen.

The Romans used no outposts. Even the cavalry patrols were brought into the camp during the night. The night was divided into four watches, signaled by the trumpeters. Each cohort on guard thus had a quarter of its strength on duty while the three reliefs rested on their arms. No doubt the centurions of the cohorts with guard duty went the rounds at intervals, and possibly the duty tribune also.

Winter quarters were laid out in the same manner, although more room might be allowed than when in the field. The tents were replaced by huts, and sheds were built for the pack animals and the cavalry mounts. A winter camp would also be more elabo-

rately fortified, with gates, and towers on the walls.

The actual battle formations of the legions has been a subject of much discussion, but, as in many details concerning Roman tactics, much remains a matter of speculation. We are not told, for instance, the actual front of a cohort in line of battle. But Caesar mentions fighting on a ridge (at Herda, in Spain) and states that the ridge was just wide enough for three cohorts in order of battle. The ridge has been identified, and measured, and the opinion of experts is that at the time of the battle the ridge was 360 feet across. The circumstances of the fight indicate that the cohorts must have been drawn up without any intervals, thus giving 120 feet as the front of a cohort. Under the reasonable assumption that each man occupied a front of three feet, the experts arrived at a figure of a front of thirty-six men made up of three twelve-man files, plus an interval between maniples. Figuring the average strength of Caesar's legions at 3600 men, this gives ten 360 cohorts or 120 men to a maniple. So the maniple presumably stood in ten ranks, and occupied a space 35 feet wide by 46 feet deep (allowing

5 feet breast to breast in the files). This is probably as close as we shall ever come to knowing the exact formation, and is a good example of the way in which many of these details have been worked out.

Three feet per man left enough room to throw the pilum, but Vegetius tells us that the legionary needed six feet for using his sword. The simplest way to do this would have been to have every other file move forward one pace and this is very probably what was done. When Caesar's Twelfth Legion was in difficulties, the soldiers so crowded that they were in each other's way ". . . all the centurions of the fourth cohort slain, the standard bearer killed, the standard itself lost . . ." Caesar seized a shield, rushed to the front of the line, and ordered the standards carried forward and "the companies extended, that they might the more easily use their swords." The chief difficulty in finding the truth in such matters is not that the writers of the time did not record them (although only a fraction of what was written has survived) but lies, in many cases, in the interpretation of the terms used. It is possible for two equally learned gentlemen, well versed in Latinity, to put different construction on the same words or phrases. Had the drill regulations come down to us through the ages we might be certain of these details. Unfortunately, they did not, and we must substitute the educated guess for the actual fact.

We can be quite sure that the legions order of battle was in two, three, or four lines, with considerable distance, perhaps 150 feet between them. The checkerboard formation, with intervals between the cohorts equal to a cohort front, is open to doubt. Such a formation may have had its advantages in the preliminary movements, but it seems beyond all reason that the legion would engage in hand-to-hand combat with these gaps in its front. Against a phalanxtype mass of men it would have been an invitation for attacks against both flanks of the cohort, particularly to be feared on the right, or unshielded, flank. To make any sense of this formation we must suppose that the three-foot front per man must have been doubled to six feet required for battle by a lateral movement of the cohort, each rank taking open order to its right and/or left until the gaps between the cohorts were almost filled. The second and third lines might have stood in the close order, until their support was needed.

The attack was, where possible, delivered down a slight slope, to give more momentum to the rush and an advantage in throwing the *pilum*. At a distance of some twenty paces the front ranks, possibly the first two, delivered a volley of javelins and then drew

swords and charged. If the first couple of volleys were not sufficient to eause some confusion in the enemy line, then the rear ranks might advance through the front ranks and hurl their javelins in their turn. At times, if the enemy were also advancing rapidly, there would be no time for the javelin volley and swords would be drawn at once. In describing the defeat of the Germans under Ariovistus, Caesar wrote:

"When the signal was given, our men rushed forward so fiercely and the enemy came on so swiftly and furiously that there was no time for hurling our javelins. They were thrown aside, and the fighting was with swords at close quarters. The Germans quickly adopted their usual close formation to defend themselves from the sword thrusts, but many of our men were brave enough to leap right on top of the wall of shields, tear the shields from the hands that held them, and stab down at the enemy from above."

The legionary shield was heavy, and besides giving excellent protection it was no mean weapon in itself. A sturdy legionary could do considerable damage with the metal edge, while constantly pushing and shoving into the enemy ranks behind its eoverage. In the hands of a veteran the short Iberic sword was an ideal weapon for close combat, and it would be interesting to know exactly how it was used. Its lack of length made coming to grips with the enemy a necessity, for the foe's weapons were longer and it was a case of close, or be killed. The stubby arm suited perfectly both the Roman tactics and the temper of the legionaries.

For a defensive action the legion fought in single line, in square, or in a circle (orbis). Presumably if the light troops were still in the field they were ordered into the square before it was closed. The legion, however, was an attacking, not a defensive, weapon. It was not at its best when vigorously assailed by numbers of light-armed troops, able to maintain a steady stream of spears and arrows. Except for sudden dashes at the enemy, which normally would be met by speedy withdrawal, the legions were comparatively helpless. They usually had but few archers and slingers, and the heavy pilum was easily outranged by the lighter darts of the enemy. It was due to this weakness that the fortified earthwork played so important a part in Roman tactics.

Where the enemy, even if he were in overwhelming numbers, could be enticed into a stand-up fight, the charge, the javelin volleys, and the deadly little sword usually spelled victory for the eagles. But against a foe who would not close, who met every rush by a retreat, and who was possessed of both mobility and

missile power, the legions had serious trouble. Such an enemy were the Parthians. Caesar never met the Parthians, but one of his ex-partners in the triumvirate of 60 B.C., Marcus Crassus, did, with dire results.

Crassus was made proconsul of Syria, a lucrative post, and seeking military glory as well as wealth, he provoked a war with the Parthians. These were a people from the mountainous regions east of the Elburz chain, descended from Iranian tribesmen with strong admixture of Scythian blood. These Parthians gradually conquered themselves an empire which finally took in much of the old realm of Cyrus and Darius. The Parthian army was formed in the nomad tradition. The horse-archer was its mainstay, while the infantry arm was of little importance. The Parthian horse was of two kinds, heavy armed cavalry and light. The heavy cavalry wore scale armor, ineluding thigh pieces, and iron helmets. They carried no shields, their armor being considered sufficient protection, but they bore long lances, larger than those carried by the Roman cavalry, and very long and powerful bows. These bows would drive a large arrow through any ordinary armor. Their horses were also protected by scale armor.

The light cavalry, which was the more numerous, were unarmored archers. Unlike the heavy cavalry, which relied on shock as well as missile power, the light horse-archers never came to grips, instead rode in to shoot and retired when the enemy advanced.

Crassus invaded Parthia (53 B.C.) with seven legions, 4000 light troops, and 4000 cavalry. Crossing the Euphrates at Zeugma he rashly started across the great plains of Mesopotamia. Plutarch says that ". . . He proposed to himself in his hopes to pass as far as Bactria and India, and the utmost ocean." If Crassus had any such dreams of following in Alexander's footsteps, they were to be rudely shattered. For days the Romans marched over waterless country, with no sight of the enemy, but with numberless hoofprints to show that a large body of horse was retreating before them. Then one day the remnants of a cavalry patrol returned with the news that they had been attacked by the enemy, who were in great force.

Crassus formed his army in battle array, at first in extended order, to avoid being flanked. Then, realizing the futility of this in open country, and especially when opposed to cavalry, he formed it in square. Plutarch is a little confusing (or confused) here. He states "... he drew up his army in a square and made a front every way, each of which consisted of twelve cohorts, to every one of which he allotted a troop of horse ..." Crassus commanded the center,

while his lieutenant Cassius (he of the lean and hungry look, who would one day plunge his dagger into Caesar) commanded one of the wings. Young Publius Crassus, fresh from service in Gaul where he had won Caesar's approbation (and the loan of 1000 Gallic horse) headed the other.

After an all-too-brief stop at a little stream, Crassus impatiently pushed on to meet the enemy. "... carried away by the eagerness of his son, and the horsemen who were with him, who desired and urged him to lead them on to engage, that he commanded those who had a mind to it to eat and drink as they stood in their ranks, and before they had all well done, he led them on, not leisurely, and with halts to take breath, as if he was going to battle, but kept on his pace as if he had been in haste . ."

He need not have hurried, for all too soon the rumble of the Parthian kettle drums, with "dead, hollow noise, like the bellowing of beasts, mixed with sounds resembling thunder" heralded the attack. The first intention of Surena, the Parthian general, seems to have been to smash his way through the Roman lines with his cuirassiers, but the sight of the solid ranks of the legions made him change his mind. Instead he wheeled his horsemen out to encircle the Romans, which move Crassus attempted to counter by ordering his archers and light-armed troops to charge. Here the Romans had their first experience of the deadly quality of the Parthian archery. The light troops ". . . had not gone far before they were received with such a shower of arrows that they were glad to retire amongst the heavy armed." With the light troops driven in, the Parthian archers attacked from all sides "not aiming for any particular mark (for, indeed, the order of the Romans was so close, that they could not miss if they would) but simply sent their arrows with great force out of strong bent bows, the strokes of which came with extreme violence."

The Roman ranks stood firm under the pitiless rain of shafts, without any chance of retaliation. ". . . for if they kept their ranks, they were wounded, and if they tried to charge, they hurt the enemy none the more and themselves suffered none the less."

At last young Crassus persuaded his father to let him make a charge to try and relieve the situation. Publius took 1300 horse, including his thousand Gauls, five hundred archers, and eight cohorts of legionaries. The Parthians retired before them, enticing them out of sight of the main army. Then they renewed their attacks. They drew up their cuirassiers, barring any further advance, while their light horse surrounded the detachment and proceeded to shoot it to pieces. ". . . When Publius exhorted them to charge the cui-

rassiers, they showed him their hands nailed to their shields and their feet to the ground." A charge with his unarmored horse failed, in spite of the gallantry of his Gauls, who tried to pull the enemy cavalry off their horses by grabbing their long spears, and, dismounting, stabbed the Parthians' mounts in their unprotected bellies. The remnants of the force attempted to make a stand on a little hill, but they were shot or ridden down.

The sortie of Publius had eased the pressure on the main army, and the Romans began to pick up their spirits. But soon the booming of the kettle drums announced the renewal of the battle, and the head of young Crassus on the point of a lance revealed to the whole army the fate of some five thousand of their number. Soon the pattern of the earlier attacks was being repeated. Keeping beyond range of the Roman javelins the Parthian light cavalry sent sheets of deadly missiles tearing into the closely packed ranks, while the armored horsemen charged out of the dust with their long lances. All through the rest of the day the legionaries kept their ranks under the arrowstorm, but night saw them in sorry shape. Many were dead and many more wounded; and all were disheartened with the knowledge that they had suffered great losses without being able to inflict any appreciable damage on the enemy.

Taking advantage of the fact that the Parthians, like the Persians before them, camped at some distance from their enemies, the Romans set out silently in the darkness and, abandoning many of their wounded, reached the town of Carrhae and temporary safety. Some 4000 were killed in the abandoned camp, and four cohorts who had strayed from the line of march in the darkness were surrounded next morning and wiped out. Twenty survivors who cut their way through the thickest of the Parthian host, were allowed to pass into Carrhae, as a tribute to their courage.

The Romans abandoned Carrhae and began a night retreat for the mountains. But their guides betrayed them and daylight found most of them still short of the hills and safety. The Roman foot formed for their last stand on a low rise. Surena, impressed with the stubborn gallantry of the Roman legions, decided to try guile. Under pretext of signing a truce, he enticed the Roman leaders down from the hill and murdered them. The majority of the soldiers surrendered, and of those who scattered and tried to reach safety, most were hunted down and killed. Cassius, who had left Carrhae by another route with 500 horsemen, reached Syria in safety. Plutarch puts the losses at 20,000 killed and 10,000 taken prisoner. The forces under

Surena have been estimated at from 40,000 to 50,000 men.

The results of the disaster were far-reaching. Parthia was recognized as a great power, and while there were many conflicts between the two empires in the following centuries, the boundaries of the two states remained much the same. The Romans, although they at one time held Armenia, Assyria, and the Euphrates valley as far as the Persian Gulf, made no attempts to emulate Alexander and expand their empire to the Indus. In their turn, the Parthians, while well able to defend themselves in their native deserts, were not organized to make great campaigns of conquest. The horse-archer, where given ample room to maneuver, was a deadly opponent for an army composed mainly of armored infantry, but his operations were limited to great extent by the terrain. In country unsuited to cavalry the Parthian armies lost much of their effectiveness and they lacked the organization which might have led them to combine the mounted archer with other arms. On the other hand, there is no doubt that had the Romans been in deadly earnest about conquering the East, they would have so re-organized their forces to include large numbers of cavalry and possibly a far greater percentage of foot archers, armored and using weapons of greater power. In that case they probably could have conquered all Parthia. But the Eastern frontiers were only a part of the vast military commitments of the Roman state, and the rulers of the Roman world were content to let the boundaries of the two empires stay more or less permanently fixed.

The enemies that Caesar faced were of a different caliber altogether. The Gauls and Germans were magnificent fighters—fine physical specimens, whose lives were spent in hunting and warfare and the practice of arms. The fearless warrior was their beau ideal, military glory and soldierly honor part of their way of life. Of the two nations the Germans were the more formidable opponents physically, yet had less discipline, and less cohesion among their numerous tribes than did the Gauls, if that were possible.

The lack of discipline might have been counterbalanced by an advantage in weaponry, as in the case of the Parthians, but the Gallo-Germans had no such advantage. While their javelins were lighter, and therefore of longer range, they did not have the penetrative power of the *pilum* of the legionary. They used a long, two-edged sword, adapted rather for slashing than thrusting and, again, while affording a longer reach, it was in no way superior to the short Roman sword. The Gauls and Germans, or some of them, wore bronze or iron breastplates or sleeveless

or short-sleeved jackets of scale armor, similar to the brynja of the Norsemen. They also wore mail, although it is to be supposed that this was rare, and possibly only worn by great chiefs. Helmets were of iron or bronze, and were often decorated with horns or conical metal spikes and with crests of hair or feathers—anything to make the wearer appear taller and fiercer. Leather helmets and armor were also used, and it is likely that many of the poorer or more primitive wore no protection at all.

The Gauls usually fought in a phalanx, although it is not to be inferred that this formation had any of the orderliness of the Greek array. The men stood close together, and the shields (generally tall and narrow), of the front rank presented an almost solid wall to the enemy. The ranks behind raised their shields over their heads. With their ranks packed closely and without order there was no opportunity for those in the rear to change places with those in front, as could be done in the more open Roman formation. The mob behind could exert pressure, both moral and physical, but could accomplish little else

The Gallic cavalry was good, and that of the Germans was rated even higher. The Gauls had always esteemed their cavalry more than their infantry—to own and ride horses being a mark of wealth and position. They had often been used as auxiliaries by the Romans and by Hannibal. Caesar had as many as 4000 with his army although he did not always trust them completely. It may be noticed that when he went to a conference with Ariovistus (it was agreed that he should not take more than 500 cavalry with him) he picked that number of men from the ranks of the Tenth Legion, and mounted them on his Gallic allies' horses.

The Gallic cavalry was equipped with javelins and long two-edged swords, and were usually armored with some sort of cuirass, of plate, scale, or mail. They wore casques and carried a small round buckler. Like their foot soldiers they were undisciplined and for this reason displayed little tactical skill. They relied mainly on the shock of the charge, delivered in a mass attack which fitted well with their notions of chivalry. However, Vercingetorix made excellent use of his horsemen, to harass the Romans and cut off their supplies. This able commander seems to have had a real grasp of the strategic use of the arm, as well as its tactical employment.

The German cavalry were armed with a short spear. Like most weapons of this sort it was sometimes used as a lance, and sometimes thrown like a javelin. As compared to the Gauls, they seem to have



Roman auxiliaries. Gallic horseman, Asiatic archer, slinger from the Balearics

had but little defensive armor (this applied to their foot soldiers, too) and many wore nothing but skins and carried shields of wicker. Their horses were not very good (small, ugly things, Caesar called them) nor do they seem to have had any interest in buying good stock and improving their animals, as did the Gauls. They rode bareback and are said to have despised as effeminate those who used a saddle pad or blanket. They often jumped from their horses and fought on foot, training their horses to stand until their riders returned. They showed no fear of being outnumbered. Caesar recounts that, in the campaign against the Suebi, the German horse, numbering some

800, unhesitatingly attacked 5000 of his Gallic cavalry and completely routed them.

Ariovistus had a corps of 6000 horsemen, and to these were attached an equal number of foot. Caesar wrote: "The latter, particularly good runners, and remarkable for their courage, had been chosen out of the whole army, each cavalryman picking his own infantryman to look after him. When the cavalry were in difficulty, they fell back on this body of infantry and the infantry would quickly concentrate. The foot soldiers would rally round any horseman who was wounded and had fallen from his mount. Long training had made them so fast on their feet that in a

prolonged advance or in a quick retreat they could keep pace by running alongside the horses and clinging to their manes."

When Vercingetorix had induced most of the Gallic tribes to join him in his revolt, Caesar had to look elsewhere for his cavalry. He turned to the German tribes which he had pacified or with which the Romans had treaties, and raised a considerable force. Appian put it as high as 10,000 men.

For all the bravery and dash of the barbarian cavalry, the Romans never reckoned them as a serious threat to legionary troops in formation. If the charging cavalry struck an unprotected flank, or caught infantry in disorder, that was another matter, but steady infantry presenting an unbroken front was considered safe.

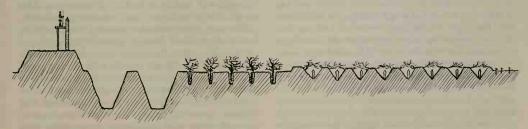
Sieges played a great part in Caesar's campaigns, and again we are struck with the speed with which his wiry little legionaries could raise vast siege works, using only the simplest of hand tools. The double line of entrenchments surrounding Alesia are a good example. The innermost of these lines of circumvallation was some ten miles long. Another line was constructed with a perimeter of thirteen miles. Eight camps were built and fortified along the lines, and twenty-three redoubts. To protect the main works from sudden attack, a ditch was dug 20 feet deep and the same in width, with perpendicular sides, 400 feet in front of the lines. Beyond this interval two trenches were dug-15 feet wide and 15 feet deep. Behind this there was a rampart with palisades and battlements 12 feet high. Where this joined the rampart forked branches were fixed, projecting outward and down, to prevent an enemy from climbing up. The palisade was further strengthened with towers every 80 feet. In addition, the front was further protected by a threefold line of traps and obstructions. Five rows of sharpened branches, forming a thick entanglement, were dug in, and eight rows of conical pits, three feet deep and three feet apart, were dug

in a checkerboard pattern. Each of these pits (nicknamed "lillies" by the Roman soldiers) concealed a sharpened stake and was covered with brush and reeds. In a belt stretching in front of these, stakes were driven in, to which barbed iron hooks were attached.

In back of this formidable series of works, but facing outward, another line similar to the innermost was constructed. For while Vercingetorix was besieged in the town with some 80,000 men all Gaul was rushing to his rescue, with armics totaling over a quarter of a million. The perimeter of the outer defenses was 13 miles. This huge undertaking was completed, we are told, in about forty days.

Mention has been made of the siege weapons of the Romans. Some of these engines were capable of throwing a heavy stone and were useful in smashing battlements and wooden towers, and the engines mounted on the defenses by the besieged, but in general they were not powerful enough to breech a wall. There was only one way to do this. The wall had to be approached close enough to undermine it, break it down with battering rams or mural hooks, or a mound raised against it so that attacking troops might pour over it. To apply one or more of these methods of attack the Romans used various devices, similar in effect if not in actual design, to those used by the Greeks and the soldiers of the Near East.

These devices in the main consisted of protective shields, or mantlets; or movable sheds built of heavy timbers. These were used to shield the workers from missiles hurled from the walls, protect the archers and the crews of the close range missile-throwers, and to make it possible for miners and the men who manned the battering rams to operate. To these shields were added movable towers, from which the ramparts could be overlooked and the defenders of the walls driven off or scriously hindered by archery and light javelin-shooting catapults. The battering rams were often very heavy, and were suspended from the tops



Rampart, ditches and obstacles of Caesar's lines of circumvallation at Alesia

of the long movable sheds which covered them. As was usual with such structures, great care had to be taken, because they were able to be set on fire easily.

On occasion, in sudden attacks when there was no time to build protective shelters, a living shed was made by the legionaries locking their shields over their heads. This *testudo* or "tortoise" advanced to a wall or gate, and under the shield-roof the structure was attacked with pick or axe.

Mining and countermining was often resorted to. When the foundation of wall or tower to be destroyed was reached underground, the earth under the foundations was dug away and the masonry propped with heavy timbers. When all was in readiness, the chamber was filled with dry wood, oil and other combustibles, and set alight. When the props burned through the wall above collapsed. The besieged kept listening posts manned day and night to detect any sounds of digging underground. Metal basins full of water were one means of detection. The vibration set up by the blows of pick and mattock causing little ripples on the otherwise smooth surface of the water. When such mining operations were detected, counter shafts were sunk, and the enemy's tunnels broken into. Then fierce battles raged underground in the darkness, with sword and dagger against pick and spade.

With the same facility with which Caesar's soldiers addressed themselves to the engineering tasks involved in fortifying their camps and besieging their enemies, they also undertook to build bridges and construct and man fleets. The bridge over which Caesar crossed into Germany following his victory over the Usipetes and Tenchtheri is described in some detail in the *Commentaries* and the account is worth repeating.

It is believed by some that the crossing was at or near the present city of Bonn, although the exact point is in dispute. The river at this point is over a quarter of a mile wide and the stream swift. The bridge was constructed in the following manner:

"Two piles, eighteen inches thick, slightly pointed at the lower end and of lengths varying in accordance with the depth of the river, were fastened together two feet apart; they were lowered into the river from rafts, fixed firmly in the river bed, and driven home with piledrivers. Instead of being driven in vertically, as piles usually are, they were fixed obliquely, leaning in the direction of the current. Opposite these again, and forty feet downstream, another pair of piles was fixed and coupled together in the same way, though this time they slanted forward against the force of the current. The two pairs of piles were then joined by

a beam, two feet wide, the ends of which fitted exactly into the spaces between the two piles of each pair. The pairs were kept apart from each other by braces which secured each pile to the end of the crossbeam. The piles were thus both held apart and, in a different sense, clamped together. The whole structure was strong and so adapted to the forces of nature that the greater the strength of the current, the more tightly locked were the timbers. A series of these trestles was pushed across the river. They were connected with each other by timbers set at right angles, on top of which were laid poles and bundles of sticks. Moreover, an extra set of piles was fixed obliquely on the downstream side of the bridge; these were connected with the main structure and acted as buttresses to take the force of the stream. Other piles were fixed vertically in the river bed a little way upstream from the bridge so that if the natives attempted to destroy it by floating tree trunks or ships down the river, this row of barriers would lessen their force and save the bridge from being damaged."

The time taken to build the bridge, including the timber cutting, was ten days.

Bridges of boats were often used, but the boats used seem to have been collected locally rather than transported for the purpose like the pontoon bridging trains of more modern times. Caesar mentions building wicker boats covered with hides (coracles) similar to those he had seen in Britain. These he transported to the river bank on wagons, but they were used to ferry troops across, not as the supports for a bridge.

Wherever possible, streams were crossed at fordable places. When the waters were deep and the current strong, a line of horsemen were stationed stretching across the river, just upstream of the ford, to break the force of the current. Another line downstream saved any infantrymen who lost their footing from being swept downriver. On one occasion in Spain, in absence of sufficient timber, Caesar spent some time in making a ford by diverting part of a stream (the river Segne) into trenches 30 feet wide.

The campaign against the seafaring Veneti, who inhabited that part of Brittany around Vannes, showed considerable ingenuity on the part of the Romans. The ships of the Veneti, stoutly built for the rough waters off that rugged coast, were superior to those of the Romans. "They were so strongly built that we could do them no damage with our rams and they towered up so high that they were almost out of range of our javelins and, for the same reason, were hard to lay hold of with grappling irons."

The lightly built galleys of the Romans (the Veneti did not row their ships, but relied on sail alone) were at a disadvantage, but some genius among the Romans hit upon the idea of cutting the Veneti's halyards, which held up the great yards to the masts, with sickle-like hooks on long poles. Once cut, down came the yards with a rush, smothering those underneath in a tangle of sail and cordage. Deprived of their mobility, the enemy vessels fell prey one after another to the Roman boarding parties. As with the Carthaginians, once an enemy ship was fairly grappled the legionaries soon did the rest.

The soldiers showed skill in boat building, as well as in naval warfare. This is attested by the orders Caesar left when returning to Italy (as he usually did when the legions went into winter quarters) for his men to build as many vessels as possible for the second invasion of Britain (54 B.C.). The "possible" amounted to an incredible six hundred transports and twenty-eight warships, as well as many old vessels repaired "amidst the utmost scarcity of all materials . . ." The legions earned their pay, even in winter

The actual landing of the first (55 B.C.) invasion forces serves as a good example, not only of Caesar's versatility as a commander, but also of the steadiness of the legionary under unusually trying conditions. The landing was opposed in some force, and the transports drew too much water to be beached. The heavily armed and armored Roman soldiers were faced with the prospect of jumping from the transports into water of uncertain depth and wading ashore, meanwhile subject to attack from the infantry and cavalry of the Britons. Small wonder that they ". . . failed to show the fire and enthusiasm which could always be expected of them in battles on land."

But the warships, of less draft than the transports, were ordered to run ashore on the flanks, where their archers and slingers and the catapults mounted on their decks could clear the beaches. Thus encouraged, the aquilifer of the Tenth jumped into the surf, calling on his comrades to follow their eagle. The men disembarked, but were badly harassed by horsemen riding into the water and attacking them before they could form. The small boats of the fleet were then filled with soldiers and used as mobile supports. This move proved sufficient, and the legions were able to form and gain the beach.

The same invasion of Britain brought Caesar's men into contact with a weapon with which they were unfamiliar. This was the chariot, a favorite weapon of the Britons, and one which they used with considerable efficiency. They fought from them, hurling

javelins as they tore along, or they dismounted and fought on foot, while the drivers held their chariots in readiness. Evidently the Britons had attained great skill with these machines. Caesar tells that they were able "to control their horses at full gallop on the steepest slopes, to pull them up and turn them in a moment, to run along the pole, stand on the yoke, and dart back again into the chariot." However, effective as the chariots may have been in the style of fighting favored by the islanders in their inter-tribal wars, they accomplished little against the veteran legionaries. They hampered Caesar's cavalry and limited his foraging expeditions, but they could not face the solid ranks of the legions.

The Slow Death of Empire

That much of the success of the legions against the Gauls was due to Caesar goes without saying. When Roman was pitted against Roman in the long and bloody eivil war which followed the famed crossing of the Rubicon, the legions under his leadership were as victorious against their fellow citizens as they had been against the barbarians. By the time they faced Pompey at Pharsalus they were picked men, the cream of the Roman armies, and the finest troops in the world. More important, they knew it. They proved it that day, routing an army greatly superior in numbers, and winning for their general the mastery of the known world - and death in the senate-house.

In equipment and tactics the legions of Augustus differed little, if at all, from those of Caesar's day. But the reforms in the army itself were far-reaching. The disorganization which inevitably followed the years of civil strife, and the increasing demands for troops for the border wars of the ever-expanding Empire called for complete overhaul of the military system. Chief among these reforms was the formation of the troops of the subject races into a stable and wellorganized army-roughly equal in numbers to the legions themselves. These auxiliaries were formed in cohorts (infantry) and alae (cavalry) and were attached to the legions much as had been the socii of the old republic. Where before they had often been raised and officered by their tribal chiefs, and for stated periods, sometimes for a campaign, or a few summer months, they were now regularly enlisted and served under Roman officers. On occasion (and



Trumpeter (Cornicen)

this occurred more frequently as the years went by) the auxiliary officers were themselves from the subject people—leaders who had served in Rome or with the legions and had become Romanized.

Sometimes, the auxiliaries retained their native weapons, but by the second century A.D. this practice seems to have disappeared, and they were trained and armed in the Roman fashion. Their equipment varied from that of the regular legions, however. Most had helmets of some pattern or other and many were equipped with shirts of mail or of small scales. They carried a thrusting lance, lighter than the *pilum*, although the long broadsword, the *spatha*, which was characteristic of all the auxiliaries, must have been heavier and more unwieldy than the short sword of the legions.

These auxiliaries were not paid at the same rate as the legionaries, and their terms of service may have been longer, possibly twenty-five years. After discharge they received a bounty and Roman citizenship for themselves and their families. The cohorts seem to have been of different strengths. Quingenaria cohorts of five hundred men are mentioned, and miliaria cohorts a thousand strong. A peculiarity of the cohort organization was the inclusion, at times, of a body of horse in an infantry cohort (cohors equitata). Thus a quingenaria might have 380 foot and 120 horse, and a miliaria 760 foot and 240 horse. An ala might also include some infantry (ala peditata). This arrangement would make a cohort a self-contained unit, and might have advantages, both administrative and tactical, in certain circumstances.

The auxiliary units were given titles and numbers. Often the title came from the nation or tribe from whom the cohort was originally recruited — Cohors II Hispanorum for instance. Less frequently it was named after the officer who first raised it. Whether attempts were made to keep the cohorts and alae up to strength by drafts from the original countries of origin is not known. It is possible that as time went on, the territorial designations all but lost their meaning.

The coming of peace saw the legions brought up to the full strength of the Marian legion, or some six thousand men. At the same time the total number of legions (some forty-five at the end of the civil war) was cut down and the men discharged or used to bring other units retained up to strength. The rates of pay and the discharge bonuses, which had varied greatly during the civil war—each general trying to outdo his rival in generosity—was regularized. Enlistments were theoretically for twenty years, but when replacements were scarce men were often held for longer periods. When the legionary received his discharge his bounty often consisted of land; a little farm with a cow or two, frequently in a colony of other veterans.

But the old Italian soldier-stock was dying out—stamped out rather, by the ever-growing plantations employing slave labor, which were driving the citizenfarmers from their lands into the cities. There they swelled the mob of unemployed and unemployables, clamoring for the free bread and the bloody games which made life possible and bearable. The Empire was dying almost before it had begun to live—but dying such a slow death, and with so many transfusions of fresh blood from the provinces and from subject races that it endured for centuries.

The army of the Empire was for a little while a conquering army. But the limits to the Roman powers were finally being established, and as the boundaries became stabilized the character of the army changed. It became (gradually, it is true) an army of defense, spread along the vast frontiers of the Roman world

—a legion here, an auxiliary cohort there — but seldom grouped in anything approaching a field army. The reason for this change is not hard to find — for the enemies who might seriously threaten the Roman world did not exist — or existed as yet only in shadowy form, far beyond the bordering forests and steppes and deserts. One power only, that of the Parthians, had boundaries which marched with those of Rome, and Parthia, while always a menace, was usually content to stay beyond the desert of Syria and the mountains of Asia Minor.

Under poor leadership the Romans were not invincible, as was proved by defeats such as that of the legions under Varus in A.D. 9. This slaughter, reminiscent of Braddock's defeat, although on a much larger scale, had far-reaching results. Creasy listed it in Fifteen Decisive Battles of the World and with good reason. The smashing victory of Arminius did more than crase the names of three legions from the army lists, and, while an anguished Augustus might cry in vain for dead Varus to give him back his legions, Rome had lost more than an army.

For the disaster in the gloomy ravines of the Teutoberger Wald ended for all time Roman plans for the conquest of Germany. Whether the addition to the Empire of a Romanized Germany would have staved off ultimate conquest by the barbarians is hard to say. It may be that the acquisition of a large territory, with a virile and aggressive population, might have given strength enough to the tiring Roman state to have broken the force of the great migrations and saved the Western Empire from complete disintegration. On the other hand, Germany might have gone the way of Gaul, and the fierce Teutonic spirit might have been lost entirely in the Romanizing process. For while Rome's military organization was the finest in the world, her social and economic system was like a canker, eating into the body politic until it was rotten through and through.

One thing is certain: with the birthplace of the freedom-loving Anglo-Saxon race a Roman province, there would have been no English-speaking peoples; no Magna Carta; no parliaments; no Bill of Rights; no Four Freedoms. The battle in the Teutoberger forest posed no more immediate threat to Rome than did the Custer massacre to Washington; but seldom has the defeat of an army of regular troops by a host of barbarians had such an effect on the course of history.

Despite occasional reverses such as this, for some 250 years there was no power which could seriously menace the security of the Empire. There was almost constant fighting, but of the typical frontier sort—

brief raids and punitive expeditions; tribal uprisings and local rebellions. Consequently the armies, instead of being grouped, were scattered in garrisons along the frontiers, in more or less permanent camps. In places where danger of raids from barbarian tribes was constant, as in the North of England, walls were built, strengthened at close intervals with forts and camps. Such a wall could not stop a determined band of raiders from scaling it on a moonless night, but it could delay them, both coming and going, and more important, it could keep them on foot. For there was no way of passing horses across such a wall, and a raiding party without mounts would have little chance against the cavalry stationed at intervals along the defenses. The Limes Germanicus, which stretched from the upper Rhine to the Danube, was a similar fortification, and was similarly defended - not by a continuous line of troops, but by garrisons camped at intervals along and behind it.

Much excavation and research has been done on these fortifications and the lines of many of the legionary fortresses and the auxiliary castella have



[79]

been traced. The fortified camps of the legions occupied rectangles some 50 to 60 acres in extent. The eastella varied from three to six acres in extent according to the size of the unit, number of horses, etc. These were permanent camps. The main buildings — in some cases all buildings — within the walls were of stone and the fortifications on a scale suitable to such installations. The walls enclosed only the military establishments. All civilian activities took place outside the walls, and village adjacent to the fort housed the numerous markets, the shrines, the baths, and the cottages of the soldiers' wives and of the camp followers.

Under this system the legions became almost permanent fixtures. Of the three legions which formed the army of Britain until the gradual withdrawal of Imperial troops toward the end of the fourth century A.D. the II Augusta, whose headquarters was at Caerleon, had been in the country since A.D. 43. So had XX Valeria Vixtrix (Chester) while VI Victrix (York) was a comparative newcomer, being ordered to Britain in A.D. 122. Under such circumstances it would be inevitable that the legions acquired much of the character of the provinces in which they were stationed. Rome and Italy must have seemed far away indeed to men whose lives had been spent in cold and damp, patrolling the rugged uplands of northern Britain, or straining sun-sore eyes across the blinding dazzle of the deserts of Mesopotamia. But Pict and Parthian had to be watched, and decade after decade the unceasing vigil was kept: In Spain and Africa; in Syria and Cappadocia and along the Danube and the Rhine. Men came and served their time, and some went home. But many stayed, and their sons enlisted in the legions and their son's sons after them. In the second century of the Empire the legions probably numbered some 168,000 men, and the auxiliaries perhaps 200,000 more and all but a fraction of these were guarding the long frontiers.

The exception to this rule which kept the legions on the marches of the Empire were the Praetorian cohorts. These were originally the bodyguard of the general (praetor) but under Augustus they were made into an Imperial Guard, and some were always on duty with the emperor. They were organized in ten cohorts, each of a thousand men. They received higher pay, and enlisted for a shorter service than the regular legion, with the added advantage of being on almost permanent duty at the capitol. Their fortified camp was just outside the city. As the only regular army units stationed near Rome they more than once played the part of king-maker. On the other hand, the presence of regular troops on the outskirts of the

huge and often turbulent city was a necessity, if an unfortunate one.

Including the Practorian Guard, the *numeri*, the sailors and the marines of the fleets, the river patrols, and the "Urban cohorts" or police, the total forces of the Empire in the middle of the second century must have come close to 500,000 men. This is a large figure, and yet when the vast extent of the territory to be policed and protected is considered the number seems small for the task imposed upon it. Comparison with twentieth-century military strength points to the disparity between populations then and now. In World War II, for instance, we find the total mobilized forces of Yugoslavia (the Roman province of Dalmatia) also given as 500,000. At peak the armed forces of the countries which had at one time formed the Roman Empire totaled well over 20,000,000!

With the long Pax Romana came increasing difficulty in recruiting. The warlike peoples from whom the auxiliaries had been taken were now themselves being Romanized, and in A.D. 212 the Emperor Caracalla granted citizenship to all inhabitants of the Empire. This shortage of suitable troops led once more to recruiting from the as yet uncivilized tribes beyond the frontiers. These numeri were raised to take the place of the auxiliaries (now merely light-armed Roman troops) just as they themselves had originally been brought into the Roman service in the time of Caesar. The new auxiliaries retained their tribal ways of fighting, their costumes and weapons, and fought under their chiefs. As the raising of troops within the Empire became increasingly difficult, the number of numeri increased, and in time became so great as to threaten the safety of the Roman world.

The protective system of the second century with its fixed units and static defenses, could be severely taxed if a sudden inroad of barbarians or a revolt proved too much for the troops on the spot. Local needs usually precluded assistance to other districts in full strength, and so the practice of sending temporary commands arose, made up of detachments from various units. These "vexillations" of necessity lacked the cohesion and esprit de corps of a permanent unit, yet their use became a set custom. With no reserve or field forces available their use was probably the only solution.

A great handicap to Imperial defense was the huge area to be covered and the slowness of travel. It has been estimated that for a legion to have moved across the Empire, from York to Antioch, would have taken well over half a year. However, the need for quick movement of troops from one threatened district to another was keenly felt, and much thought and

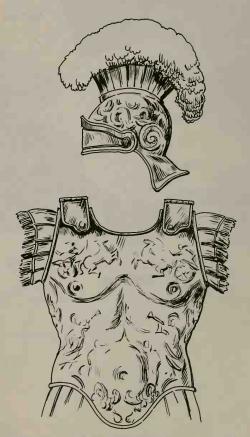
effort was spent in plotting and building a network of military roads linking strategic points.

From the middle of the third century, the pressure from the barbarian nations became increasingly severe. These invasions were invariably defeated, but their recurrence, as ever stronger waves rolled up against the bastions of the Empire, made another change in Imperial defense policy necessary. The permanent garrison forces on the frontiers became of less importance as the ancient boundaries started to give way. No scattered line of legions and auxiliaries could hope to hold the mass inroads which now began to take place. Whole nations were on the march, and to combat the hordes who broke through the thinly held frontiers, field armies were formed. These were made up of detachments from any available units, and as the use of vexillations grew, the old legions and auxiliary cohorts were in part broken up and lost their identities.

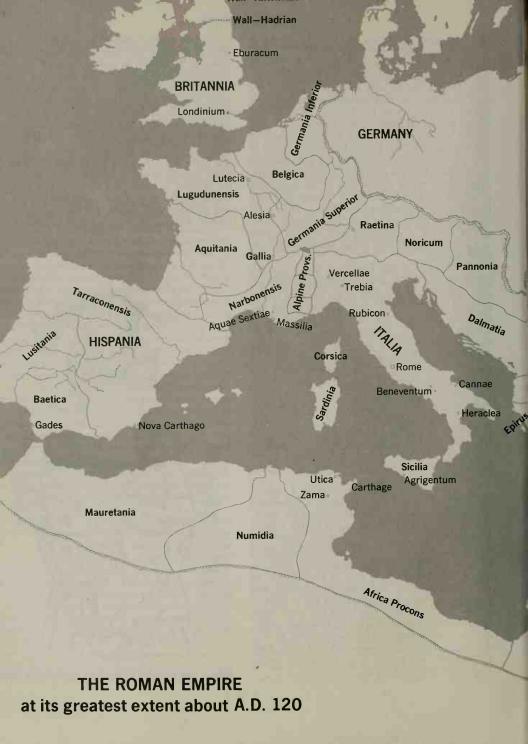
The invasions of the barbarians were aided by periods of eivil strife, yet despite occasional disasters, such as the defeat and death of the Emperor Decius in battle with the Goths (A.D. 251) the legions still held, but they were not the legions of old. Their strength, at least in the field armies, had been reduced to a thousand men. Discipline had undoubtedly deteriorated with the admission into the ranks of many barbarians, and the loss of central power and prestige due to the civil wars. Would-be emperors vied with one another in attempting to win the loyalty of the armies, and leadership based on the popularity contest was not conducive to good discipline. Any attachment the soldier had once felt for Rome had long since vanished. Training, pride of unit, and devotion to their leaders, were all that remained to the mixture of races and creeds which then made up the armies of the Empire.

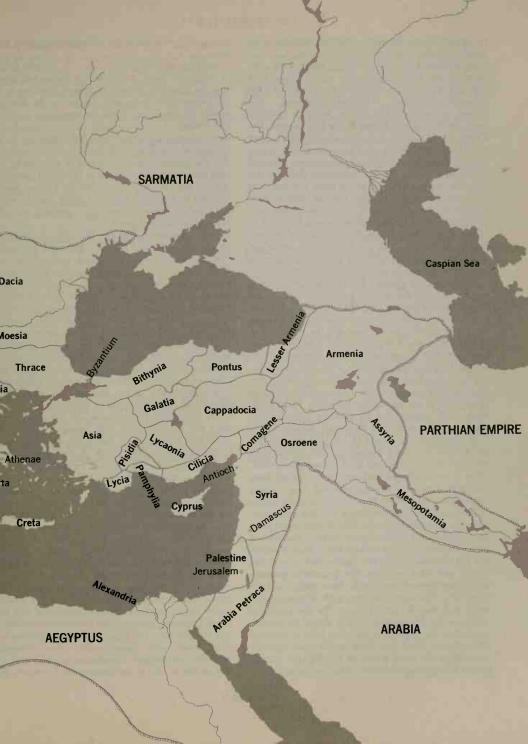
The impoverished eitizenry, crushed by a staggering load of debts and taxes, no longer were capable of furnishing men for the armies. Nor did the harshness of military life hold any appeal for the average inhabitant of the Empire. In the fourth century we find an almost feudal system of providing men, based on property - an estate of so many acres being required to furnish a man or men, in proportion to its size. "Draft dodging" and even self-mutilation was practiced to evade conscription, and the recruits so secured could not have been of a very high order. It was easier to find men for the lighter-armed auxiliaries than for the legions - few being willing to bear the weight of the heavier armor and equipment. Then too, discipline was harsher in the legions; the service longer and promotion slower.

The field armies depended on mobility to stay the tides of invasion, and there was a considerable inerease in the number of cavalry, some of whom, the cataphracti, were armored, both horse and man, in very complete scale armor. On the other hand there was a tendency toward lighter equipment for the foot soldier. By the fourth century, the heavy pilum was no longer carried. It had been replaced by the pike. This change was undoubtedly made necessary by the increasing use of cavalry by the enemies from without. With the loss of discipline came the need for closer formations and a weapon which would keep the charging horsemen at a distance. This pike was not the lengthy affair of the Macedonian phalanx, but was probably short enough and light enough to be thrown, if necessary. The word testudo came in time



Helmet and modeled cuirasse of high-ranking officer





to be applied to the dense infantry formations, instead of to the "tortoise" of former days.

By the fourth century these field forces were composed of the best troops in the service. They were grouped under three headings - the "Palatines," the "Comitatenses," and "Pseudo-Comitatenses." The former, named from the Roman word for "palace," were the best of the troops in the field armies. The Comitatenses (household troops, or comrades), were rated next, and the Pseudo-Comitatenses last. About a third of the heavy legionary infantry was attached to the field armies, the rest maintained their old stations on the borders. Service in these frontier units was now hereditary, by law. Sons of soldiers were required to become soldiers, just as laws now compelled all sons of agricultural workers and artisans to follow their father's trades. Small wonder that these isolated bodies, often all but cut off from Rome and long since integrated with the local populace, were considered inferior to the field forces of the interior.

The harder the pressure from without, the greater the exertions of the Empire to defend itself. It has been estimated that the total of all troops, of all types, in service in the fourth century amounted to some three-quarters of a million men and the maintenance of such forces was a crippling burden on the luckless taxpayers. The population had been thinned by war, plague, famine, even infanticide. Commerce was coming to a standstill and once cultivated areas were growing back to waste, the owners and cultivators having fled to escape the tax collectors. These lands were partly repopulated by allowing barbarians to settle on them, in itself a dangerous precedent.

As time went on, instead of the barbarians within the Empire becoming Romanized, the reverse held true, and the provinces and army became barbarized. Some Romans adopted barbarian styles, letting their hair grow long, and wearing furs and long trousers despite Imperial decrees. It is a measure of the failure of the Roman economic structure that the great pressure of population expansion should have come from the outside. In a well adjusted society, and with a sound economy, coupled with the many years of peace, the Pax Romana, which the legions had won in the second and third centuries, the population pressure might have been expected to be from within, and the forces of civilization should have pushed triumphantly north and east. In partial excuse for the great demands on the Roman taxpayers, it should be remembered that the Imperial government held to the now old-fashioned belief that taxes should meet expenditures. Had the fiscal policy of the Romans encompassed a staggering and ever-increasing national debt,

a temporary way out of the dilemma might have been

As things stood, the very size of the Empire helped to destroy it. Every weakening of the central power was the signal for generals in distant provinces to set up independent commands, or to try to win the purple for themselves. With the continuous invasions and rumors of invasions there was a natural breakdown of communications. This led ultimately to the division of the Empire. It had long been apparent that the Roman state was too vast to be ruled by one man from one city. It was left to Diocletian (A.D. 284–305) to take the steps by which the Empire was to be ruled by four men, two chief rulers, each of whom were called Augustus, and two assistants, who received the title of Caesar.

Under the new system the West was governed by Maximian (Augustus) who held Italy and Africa, and Constantius (Caesar) who ruled Spain, Gaul, and Britain. Diocletian, as senior Augustus held the important territories of Egypt, Asia, Thrace, and Macedonia, while his Caesar, Galerius, ruled Noricum, Pannonia, and Moesia. While the reins were in Diocletian's capable hands all was well, but on his voluntary retirement old jealousies and rivalries broke out, and civil wars followed which finally resulted in the accession of Constantine, son of Constantius, as sole Emperor. None of the four courts of the Augusti and Caesares had been at Rome, and now as a final blow to the supremacy of the Eternal City, Constantine established his new capital at Byzantium.

The successors of Constantine – in the midst of civil wars and internal strife – still managed to hold the crumbling Empire intact, but it was by now Roman in little but name. The courts of the emperors were modeled on those of Oriental monarchs; whatever freedom of speech and action the senate and people had had under Augustus had long since vanished, and the legions, once the pride of Italy, were now for the most part barbarians but little more civilized than the tribesmen they sought to keep out. It says much for the organization and tradition of the Imperial army that it could still, after years of disorder, invasion, and civil war, beat back the invasions which came with increasing strength and frequency.

But by far the greater change came also in the fourth century when the cavalry replaced the infantry as the chief arm. Under the circumstances, this momentous change, going against centuries-old tradition, was a logical one. The massed infantry formation had never been easily maneuverable. Even Alexander with the well-trained Macedonian phalanx had relied on the cavalry as the decisive shock weapon. For

another thing, against an enemy who employed a large proportion of horsemen, the armored infantryman was too slow. Any large force of mounted invaders who broke through the perimeter defenses of the Empire could do terrible damage unless speedily brought to action. The answer to this was more cavalry, both attached to the frontier forces and to the field armies.

As to the relative merits of the two arms, there has never been any question that under normal circumstances infantry was the chief arm. As has been proved time and again, a steady infantry in formation, even if not armed with any missile weapon, such as the bow or musket, could beat off any cavalry attack. It had been suggested that the terrible defeat (A.D. 378) of the Emperor of the East, Valens, at Adrianople showed the superiority of eavalry over infantry. It did nothing of the kind. All Adrianople demonstrated was that under poor generalship even a trained army could be destroyed by a force, inferior in discipline but superior in numbers and mobility. Varro, Varus, or Valens - the names all spelled disaster. The legionaries of Valens were certainly inferior in quality to those of Cannae and the Teutoberger Wald. Yet had a Scipio or a Caesar commanded at Adrianople the Goths would have sustained another defeat. As it was, within two years every Goth south of the Danube had either been killed or captured.

The defeat of Valens (his death in the battle undoubtedly contributed to the final rout) may have hastened the shift of emphasis from the legionary to the cavalryman, but the change of tactics noted above, plus the pressing need for mobility, would have ultimately accomplished this in any event. It is

barely possible that had the legions of the fourth eentury been those of Caesar's day the change would not have been necessary. Yet Carrhae showed that the legions were not ideally suited for engaging large forces of cavalry, and Scipio owed his victories in great part to his horsemen. In harking back to the glories of the past, the tendency is to sell the soldier of the late Empire short. This is a mistake. It is never possible to recreate the motives, emotions, values, or mentality of men of different ages and different environments. The semi-barbarian soldier of Theodosius was as far removed from the legionary of Marius as a modern American is from a matchlock man who followed Miles Standish. But, granted that he was the product of a different time, does that make him any less a soldier? I think not. With army organization gradually disintegrating; with discipline sadly impaired; often with inferior leadership and always under attack by forces, many of whom were Romantrained, and almost all by now equally well armed, the soldier of the last days of the Western Empire remained in most cases true to his salt. When we read of the fall of the Roman state, it sometimes brings up visions of a "last grim battle in the West" with the last of the eagles going down in final defeat before the hordes of barbarism. In reality the Roman army, by then almost wholly barbarian in blood, lost little territory in battle. The leaders who finally won control of areas of what had been the Empire did so because they themselves commanded units of Roman auxiliaries or allies. That there was still magic in the name is attested by the survival of so much that is Roman, and even the name of the Holy Roman Empire (though neither very holy nor very Roman) persisted for many centuries.



THE VIKINGS

TO PICK ONE outstanding fighting man of the scores who battled over the ruin of the Western Roman Empire is a difficult task. Goth and Hun, Vandal and Frank, Angle and Saxon, and many others equally as warlike surged over the foundering wreckage; and in their turn many of these nations on the march settled down, along with the survivors of the old provinces, to form in time the genesis of the new Europe. The fifth century saw the Goth and Roman combine to win the last great Roman victory. Twenty-five years after the defeat of Attila at Chalons a youth with the historic name of Romulus Augustulus was deposed - the last emperor in the West. Not until the year 800, when Charlemagne was crowned by Pope Leo III in St. Peter's would any man claim that title. But before that giant among men (a giant literally as well as figuratively - he was six foot four) had stretched his Empire from the Elbe to the Pyrenees another Charles, the redoubtable Martel, the Hammer, had beaten back a Moslem invasion of France.

The men of the West certainly were no strangers to war; and the almost constant struggles among themselves, and between them and the rising power of Islam, did not allow their fine fighting edge to become dulled. Yet all the hordes of belligerent semi-savages who inhabited the continent and the British Isles came in time to hold one race in particular dread. The sight of their sails and the low hulls of their long ships was enough to set warning beacons flaming on the headlands, and the inhabitants racing for safety in the nearest walled town, or far inland. Heathens, they were, worshipers of Thor and Odin, and neither minster nor monastery was a refuge from their fierce attacks. Setting out from the Northland, their raiding keels cut the waters of most of the bays and river mouths of Western Europe and as far east as Constantinople. Their impact was all the greater, coming as they did at a time when the war-ravaged countries of the West seemed on the verge of recovering in some measure the peace and prosperity of the days

of the Roman Empire. The devout looked upon such savage incursions as a sign of divine wrath, as had their ancestors, who named Attila the "Scourge of God." Meantime many a ruler, whose forces could not cope with the "fury of the Northmen" dipped into his coffers for bribe money with which to buy the raiders off.

Not that the Scandinavian warriors were invincible. On occasion they met with severe defeats. And, as their purpose in most eases was to loot and then to retire to their ships with their captives and plunder, they very naturally avoided pitched battles when the fighting of such battles served no useful purpose. It may be noted that where the people of some province or nation were under a strong leader - one who had the strength of character and of arm, to weld the fighting men of his country into a cohesive force they were usually left in peace. But in most localities there were no properly organized units to oppose the invaders. The general breakdown of all civil authority, and the inability of the local ruler to exercise any but the most tenuous control over his nobles and leaders, precluded any attempt at concerted action. In consequence the Northmen struck where their prey was weakest and usually avoided those places where they could hope to gain little but hard knocks.

Piracy had always been difficult to combat, even in the great days of the Roman Republic and of the early Empire. Without a strong, prosperous, and well-established central government, nothing in the nature of a permanent naval force was possible. At best such forces could consist only of a few fishing or merchant craft – hastily gathered and as hastily dispersed as soon as the immediate threat of danger was past. Obviously, no temporary force could be of the slightest use in countering raids, often delivered in strength, which might come at any time or any place.

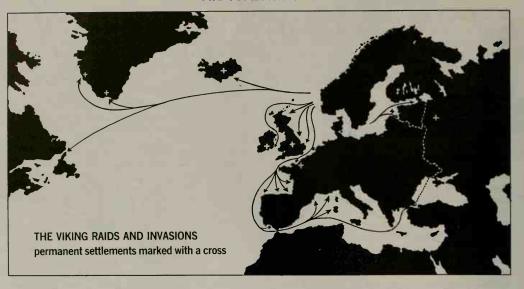
In consequence the Scandinavian seamen - and they were the best in the world-had almost unrestricted freedom of action, and could land their crews of marauders wherever it suited them. The waterways of Europe were their highroads, and the mobility of their forces was in marked contrast to the slowness of the defense, hampered as it was by almost non-existent communications. This ability to launch their attacks wherever there was water enough to float their hulls was one of the most disconcerting features of the Norse invasions. In most cases, by the time the local leaders had gathered enough armed men to make head against the raiders, the pirates would have gone, taking their prisoners and booty, and leaving behind flaming dwellings and strewn corpses as a token of their visit.

The impact of the Norse raids on the shaky civilization of Western Europe was immense. So fierce and so numerous did these forays become that for a while it seemed as if the Christian countries of the West must be completely shattered, and revert once more to the barbarism out of which they were just beginning to climb. Nor were the Northmen content with plundering expeditions alone. In many instances land and not booty was their goal, and chiefs and jarls carved themselves new kingdoms out of the conquered territories.

The reason for the great eruptions of Scandinavians in the ninth and tenth centuries is hard to find. Just why the pressure of a sudden expansion of population (if that is one of the causes) should occur at this particular time, only to die down again, is a riddle which may never be answered. Certainly the Northern lands were inhospitable enough, and incapable of supporting any sizable increase in the number of inhabitants. Whatever the reason, by the end of the eighth century numbers of Northmen were on the move, and, being a sea-faring folk by virtue of their environment, it was only natural that they should seek their fortunes on the seas. Beginning in the latter part of the eighth century the number and intensity of their raids increased, until by the middle of the ninth century piracy had become an industry, and swarms of raiders descended yearly on the lands to the south.

As the strength of the raiding parties grew, instead of individual vessels whole fleets would appear off the Christian coasts. It became customary for the Northmen to winter in or close to a district where prospects for loot and supplies were good. At first the usual procedure was to seize an island offshore, thus securing an easily defensible base for future operations. As the raiders grew bolder, and as the attacks came with greater frequency, the surviving inhabitants in many eases abandoned their manors and villages and moved bodily inland, leaving stretches of coastal regions deserted; empty of life and loot. But the Northmen were not content to confine their depredations to the lands along the coast. Seamen are well known for their ability to adapt to conditions and Scandinavians were no exception. The countryside was scoured for horses, and mounted parties of raiders swept far inland, spreading devastation in communities which had believed themselves safe.

The most common term for the Northmen, and one which gave its name to the age characterized by the great plundering expeditions and to the widespread Norse conquests and settlements, was the word, Viking. The name is usually held to have come from the



Norse word vik, meaning a creek or inlet, and was properly applied to those who dwelt by the sea and made their living by trade and piracy. It has come to mean any Scandinavian of the period, but it would seem that the more settled of the Norse regarded the true Viking as a pretty rough customer—much the same as a tough frontier farmer might have looked upon a woodsman; part trader, fighter, scout, scalp hunter, and general hell-raiser.

However, even the most responsible landowner thought little of going on a Viking expedition during the summer months. Often these raiding parties were combined with trading operations and it may be inferred that in many such cases the "traders" paid only when the sellers proved too strong to be robbed. Such rough and ready tactics were no new thing, and the average merchant seaman of the ancient world, and even down past medieval times, was usually a semipirate-as adept with sword and boarding pike as with the more peaceful tools of his trade. Nor were the Northerners averse to robbing each other when opportunity offered. Of national feeling there was little or none. There might be ties between kinsmen or neighbors, but by and large every man's hand was against all others, and the strongest prevailed.

Ruthless and savage as the Northmen could be, they were possessed of a culture far beyond that with which they are usually credited. In many respects this Scandinavian civilization compared favorably with that of the Saxon, Frankish, and Teutonic lands to the south. And where the Northmen made permanent settlements, they proved adept at assimilating the best features of the culture of the conquered peoples. In the long run the infusion of Northern blood and culture was of no small value to the conquered lands. But it is easy to be objective after the passage of so many centuries and no non-Scandinavian of the eighth or ninth centuries would have seen any value in anything connected with the dreaded Vikings.

In arms and armor the Viking warrior was not differently, or better, equipped than the fighting man of the lands he attacked. Swords and spears and battle axes were the chief weapons, although archery also played a part and noted archers were held in high esteem. Iron helmets, sometimes fitted with horns or raven's wings were in general use, and body defenses consisted of brynjas or shirts, usually short-sleeved, of some material or leather sewed over with overlapping plates or scales of iron. These iron-scaled shirts, the spanga-brynjas, were often used, but even more common, and more sought after, were the brynjas of mail, which seem to have been known in the North since early times. Some were noted for their strength and workmanship:

"Hjalmar said: 'I want to fight Angantyr, for I

have a brynja in which I have never been wounded; it is set with four-fold rings." (Orvar Odd's Saga)

Not every man possessed such a defense. In the Saga of St. Olaf, that king's crew was "so well equipped that everyone had a *brynja*; and on this occasion they did not get wounded."

A Shields were round, at least in the early days, and made of wood. Many had an iron rim, and an iron boss—often containing the handle. They were nearly always painted, sometimes with intricate designs, and others in plain colors. Later (c. 1000) the shape changed to the kite-shape associated with the Normans of the Bayeux tapestry. When on shipboard they were at times carried ranged along the gunwales, where they were out of the way, made a brave show, and served to protect the rowers.

However, pictures which show the shields hung over the sides while the ship is under sail are incorrect. Any such display, except in the gentlest breeze, would result in their being washed away. Shields found on the Gokstad ship were three feet in diam-

eter, painted black or yellow.

I Swords were of two kinds: straight two-edged weapons, usually with blades some 32 or 34 inches long; and single-edged swords (saxes). These saxes were shorter, usually 24 inches or less, and broader in the blade than the two-edged swords. The back from tang to point was shaped in a convex curve! Being the most cherished of a warrior's possessions, the sword was often inlaid with gold or silver, while the hilt and scabbard were richly decorated. The making of steel by the addition of carbon was unknown and various localities became noted for their metal because of the natural properties of the native ore. Of course the professional skill of the swordsmith had much to do with the finished product and a weapon from the shop of a famous maker was highly prized.

From Olaf Tryggvason's Saga we read: "King Athelstan gave him a sword, with hilt and guards of gold, but the blade was still better; with it Hakon cut a millstone through to the center hole . . . It was the best sword that ever came to Norway."

Most famous blades were named. Besides being superior weapons, they achieved fame from the skill and bravery of their owners. Many were believed endowed with magical qualities; forged by the gods or made potent by charms and incantations at the time of forging, or engraved with mystic signs. The legendary Tyrfing, sword of Sigurlami, Odin's son, was perhaps the most famous. It was said to shine like the sun, killed whenever it was drawn, and always brought victory. Some blades were named for some characteristic feat. Athelstan's sword, with which

Hakon cut the millstone, was of course called Kvernbit, or mill-biter. King Magnus carried one with guards of walrus-tusk and gold-covered hilt, called Leggbit, or leg-biter.

"Hraungvid said: 'I have ravaged for thirty-three years, summer and winter, and I have fought sixty battles, generally gaining victory; the name of my sword is Brynthvari, and it has never been dulled.'"

We can discount the supernatural qualities of these famous weapons but their psychological effect may have been considerable. Thorstein Vikingsson was given a sword: "Its name is Angrvadil, and victory has always followed it. My father took it from the slain Björn Blue-tooth. . . ." He later fought with one Harek.

"When Viking drew it, it was as if lightning flashed from it. Harek sceing this said 'I should never have fought against thee, if I had known thou hadst Angrvadil . . . it was the greatest misfortune, when Angrvadil went out of our family'; "and at that moment Viking struck down on the head of Harek, and cleft him in two from head to feet, so that the sword entered the ground up to the hilt." (Thorstein Vikingsson's Saga)

We have no way of gauging the relative merits of Vikingsson and Harek as swordsmen, but it is obvious that the latter's attention at the crucial moment was more on his family's loss of the weapon than on his guard.

In times of peace it was customary for swords to be wrapped with a strap called a Fridbond, or peace-band. This band passed around the scabbard and the hilt, so that it had to be removed before the sword could be drawn. Besides being a civilized and courteous gesture, among quick-tempered men this was a useful means of preventing unnecessary trouble.

Axes were much used, and were often inlaid with gold or silver. They were of various shapes, some very wide in the blade. Many were long-handled and were wielded with both hands. Spears were of several types—some for throwing, others more on the order of a halberd, while others were heavy thrusting weapons. Some of the javelins had barbs. The thrusting spears had, of course, no projections which would hinder their being easily withdrawn from a wound. Some of this type had blades 15 inches or more in length. An extract from the account of the great battle of Brunanburgh (937) given in Egil's Saga describes one type of thrusting spear, a heavy armor-piercer.

"... he [Thorolf] also had a spear in his hand, of which the blade was four feet long, the point four-edged, the upper part of the blade broad, and the socket long and thick; the handle was no longer than

one could reach with the hand to the socket, but very thick; there was an iron peg in the socket, and the whole handle was wound with iron. These spears were called 'brynthvari.'"

The long and heavy blades were used for dealing

blows as well as stabbing.

"Thorolf... taking the spear in both hands, rushed forward and struck or thrust on both sides. Men turned away from him, but he killed many. Thus he cleared his way to the standard of Hring, and nothing could stand against him. He killed the men who bore it, and cut down the standard pole. Then he thrust the spear into the breast of the jarl through the coat of mail and his body, so that it came out between his shoulders. He raised him on the spear over his head, and put the shaft down into the ground. The jarl expired on the spear, in sight of foes and friends."

Of the vast majority of Norse spears, only the heads remain today, but occasionally a "find" in bog or tomb-mound yields a few complete weapons. The famous Vimose bog find included over a thousand spear points, but only five were complete. The complete weapons ranged from 6½ feet to 11 feet in length.

Norse bows were of wood: elm or more rarely of yew, and were usually some five feet in length. The arrows varied in length with the size and weight of the bow. Shafts discovered in the Thorsbjerg bog ranged from 26 to 35 inches, one-half inch in diameter. These last must have been for a sizable bow, and must have been drawn to the ear, as were the English arrows of a later date.

The Norse, who held poetry and the art of versifying in almost as high regard as they did fighting, had many poetic names for their armory of weapons and defenses. Swords were named, among other titles, "the gleam of battle"; "the wolf of the wound"; "the hater of mail coats"; "the tongue of the scabbard"; "the fire of the shields."

Spears were alluded to as "the pole of Odin"; "the shooting serpent"; "the flying dragon of the wounds." Axes, many of which were formidable weapons—wide-bladed and splendidly made and decorated—were known poetically as "the witch of the helmet"; "the field of the shield"; and other titles equally descriptive.

Arrows had a number of names: "the hail of the battle"; "the bird of the string"; "the swift-flyer"; "the ice of the bow," and many others. Shields, too, had their fanciful titles: "the battle shelterer"; "the net of the spears"; "the wall of the battle"; "the hall-roof of Odin"; etc. Brynjas were titled "the battle-cloak"; "the shirt of Odin"; "wolf of spears"; "blue-shirt"; "war knitting."

Naturally, so beloved a thing as the long ship had many names: "Deer of the surf"; "steed of the sea"; "Sea King's sledge"; "gull of the fjord"; "raven of the wind"; "sea wader," and others. The sea itself was called the "land of the ships"; "the Sea King's road"; "the necklace of the carth"; while the winds and the storms were the "bane of the ships"; "the wolf of the sail"; "the breaker of the trees"; "the shower driver," and so on. These and other allusions stud the sagas, and point up sharply the peculiar mixture of poet and barbarian which was the Northman of Viking days.

Physical fitness and skill with weapons was very naturally a fetish with the Scandinavians, as it was with all semi-barbarous people. In a civilization where might, in most cases, meant right and where a man's standing in the community depended in great part on his strength and ability to handle his arms, it is not surprising that we find warlike training and athletics taking up a considerable part of a boy's time. Scandinavians matured early, as did most people in those days. At sixteen a youth might already be a proved warrior.

These exercises, known as idrottir, were taken very seriously, and games and competitions were of frequent occurrence. The Norsemen seem to have competed for honor, not prizes, although many daring feats were performed for wagers or for "dares." The sagas are full of stories (pretty tall stories, too, some of them) of famous leaps or shots, or incredible feats of strength. Even allowing for some exaggeration one is left with the impression of an exceedingly virile and hardy race trained from the cradle in all that went to make up a warrior. Nor were mental attainments scorned, and while the three Rs might be unknown (and unneeded), a well-rounded Norseman of good family might be expected to be able to pluck out a tune on a harp, accompanying himself in a song which he made up on the spot. He could also recite at length from the sagas, play draughts and chess, and expound and answer complicated riddles, of which the Norse seem to have been very fond.

Foot-racing, mountain climbing, jumping, swimming, and wrestling were all popular. Among the men the last two could be rough, and the ball games, of which there were several, were rowdy enough to suit the most bloodthirsty onlooker.

". . . The game was very rough, and before evening six of the men of Strandir lay dead, but none of the men of Botn; and both parties went home."

A more genteel day's sport is also recorded.
"... and the next morning the brothers went to
the games, and generally had the ball during the day;

they pushed men and let them fall roughly, and beat others. At night three men had their arms broken, and many were bruised or maimed . . ."

Even a tug-of-war could end in scrious injury. "The king said: 'We will pull a goat's skin across the fire in this hall tomorrow'... The King ordered the hide to be brought to them. Then they pulled with all their might, and so hard that they were in danger of falling into the fire... Hörd said to Hástigi: Look out; for now I will use my strength, and thou wilt not live long. 'I will,' answered Hástigi. Hörd then pulled with all his strength, and pulled Hástigi forward into the fire, and threw the hide over him; he jumped on his back, and then went to his bench..." (Hjalmeter's and Olvers Saga)

Swimming, as well as running and jumping, was often done in full war gear.

"Then he (Egil) took his helmet, sword, and spear; he broke off his spear-handle and threw it into the water; he wrapped the weapons in his cloak, made a bundle of it, and tied it to his back. He jumped into the water and swam across to the island." (Egil's Saga)

Actual skill with weapons was of course the criterion. The great King Olaf *Tryggvason's Saga* relates that:

"King Olaf was in every respect, of all the men who have been spoken of, the greatest man of *idrottir* in Norway; he was the strongest and most skilled of all, and many accounts of this have been written. . . . He could fight equally well with both hands and shoot two spears at once."

He is also said to have been able to run around his ship, stepping from one oar to another while it was being rowed, at the same time juggling with three knives (this last seems a bit much—even for Tryggvason). His saga is full of great feats, in which he outshot, outran, outswam, outclimbed, and outjuggled his subjects. Great chiefs and kings were expected to excell in some, if not all of these exercises—if they had not, they would soon have lost the respect of their followers.

Great emphasis was placed on missile weapons, and the usual tales are found of great shots with the javelin, and of arrows splitting other arrows. The William Tell stunt is mentioned in more than one saga — a nut taking the place of the celebrated apple in one case. As might be expected, the sagas disclose that mighty kings were not always the best losers — and those who bested them sometimes came to realize that they had exhibited more skill than common sense.

The handling of sword and spear with equal facility

with either hand was a useful accomplishment—the sudden switching of the sword from one hand to another often having decisive results. The *Faereyinga Saga* tells of one Sigmund who:

". . . showed his idrott. He threw his sword and flung it into the air, and caught it with his left hand, and took the shield in his right hand and dealt Randver a blow with the sword, cutting off his right leg below the knee."

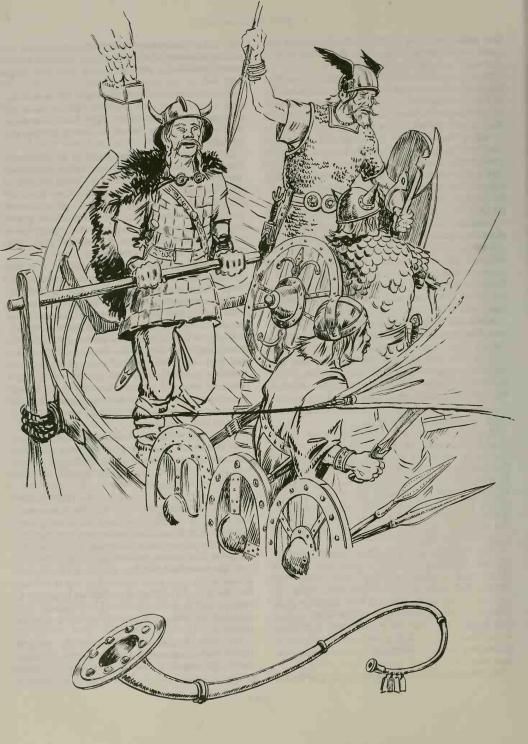
Like most people of a similar degree of culture and development, the Norse, while they fully understood the need for some sort of order in battle, thought in terms of the individual champion rather than the disciplined mass. The aim of every aspiring warrior was to be known as a champion. As Du Chaillu points out, this was no easy task among a race "equally brave and perfectly reckless of their lives, and thoroughly skilled in the handling of weapons."

In a situation reminiscent of our American West, the champion was constantly called upon to defend his laurels. There was as strong a compulsion to cut down the best swordsman in a district as there was to gun down the "fastest draw." There was also the same intimidation of the less skillful and more peacefully inclined, in fact a great deal more—for there was considerably less law in Scandinavia in those days than there was in the "lawless" West. However, there was some glimmering of public opinion, and the local champion who also became the local nuisance was sometimes urged to move to other territories, preferably far-off Greenland or "Vinland the Good," by a posse of irate neighbors.

"In the time of Hakon, Aethelstan's foster-son, there lived in Norway Bjorn the Pale, who was a Berserk. He went round the country and challenged men to holmganga (duel) if they would not do his will." (Gisli Sursson's Saga)

"It was considered a scandal in the land (Norway c. 1015) that pirates (by this time the terms pirate and Viking are becoming synonymous) and berserks should be able to come into the country and challenge respectable people to the holmgang (duel) for their money or their women, no weregild being paid whichever fell. Many had lost their money and been put to shame in this way; some indeed had lost their lives. For this reason Jarl Eirik abolished all holmgang in Norway and declared all robbers and berserks who disturbed the peace outlaws." (Saga of Grettir the Strong)

The most dreaded warriors were the berserks (those who sometimes disdained all protective armor and fought without a serk, or shirt, of mail). These doughty warriors seem to have been in the habit of



falling into some kind of fit at the sight of their cnemies. They howled, foamed at the mouth, bit the edges of their shields, and worked themselves up into such a frenzy that they convinced themselves - and their foes-that they were invincible. How much of this berserk fury was genuine and how much was bluff and bluster is impossible to say. In either case the psychological effect would have been much the same. Certainly there is a fighting madness, a red haze, which grips some men in the heat of battle, and which enables them to perform feats of daring and endurance which otherwise would be beyond them. On the other hand the fury is often spoken of as coming upon a berserk without any apparent reason. Speaking of twelve brothers, all berserks, the Hervarer Saga tells that:

"It was their custom if they were only with their own men when they found the berserk-fury coming over them, to go ashore and wrestle with large stones and trees, otherwise they would have slain their friends in their rage."

Of two berserks who followed Hakon Jarl it is said that:

"When they were angry they lost their human nature and went mad like dogs; they feared neither fire nor iron, but in everyday life they were not bad to have intercourse with if they were not offended. . . ."

Whether the berserk-fury happened to be caused by a sudden surge of adrenalin, or was a calculated attempt at a form of psychological warfare; the end result was that few save the boldest cared to stand against them. This would have been particularly true in a general engagement with everyone shouting and hewing and stabbing. On the other hand, it would seem that in holmgang—unless the opponent were thoroughly overawed before the combat began—that the advantage would lay with the cool, collected swordsman, rather than one who was in the shield-biting stage. Be that as it may, berserks were rated as formidable opponents, and kings and jarls welcomed them into the ranks of their retainers.

Standing armies were of course unknown but each powerful landowner and chief kept as many fighting men as he could afford to support. The quality of these varied with the reputation and affluence of the chief. Noble jarls and kings, noted for their prowess and generosity, attracted good fighting men and champions from all over Scandinavia. In their halls their retainers, or hirdmen, drank and feasted during the winter months, and with the coming of spring, went a-viking or on campaign.

As was natural in such companies, the arrival of a new champion was not always a cause for rejoicing among the incumbent heroes. Jealousy and arrogance prompted many duels within the hird, and the chiefs and kinglets often had to forcibly restrain their followers from committing mayhem on each other.

When a formal duel was fought it could be of two kinds: eineigi, in which there were no set rules; and holmganga, which was regulated by strict laws. The former could be fought with whatever weapon each man chose and the combatants carried their own shields. In the holmganga, on the other hand, it was customary for a friend to hold the shield for each contestant. In some cases (and the rules seemed to have varied) three shields were allowed. If the first was destroyed the second was used and so on. The field of combat was limited. Originally the term holmganga is thought to have come from the word holm (a little island) on which these duels were often fought. The combat, as described in Kormak's Saga, was fought with a cloak as the center of the arena.

"This was the holmganga law: that the cloak should be 10 feet from one end to the other, with loops in the corners, and in these should be put down pegs . . . Three squares, each one foot wide, must be marked around the cloak. Outside the squares must be placed four poles, called hazel poles: It was called a hazeled field when it was prepared thus.

"Each man must have three shields, and when these were made useless he must stand upon the cloak, even if he had walked out of it before, and thereafter defend himself with his weapons.

"He who had been challenged was to strike first. If one was wounded so that blood came upon the cloak he was not obliged to fight any longer. If either stepped with one of his feet outside the hazel poles, it was held he had retreated; and if he stepped outside with both, he was held to have fled. One man was to hold the shield before each of the combatants. The one who had received the most wounds was to pay as holmlausn (indemnity for being released from the fight) three marks of silver."

"Thorgils held the shield of his brother and Thord Arndisarson that of Bersi, who struck the first blow and cleft Kormak's shield. Kormak struck at Bersi in the same way. Each of them spoiled three shields for the other. Then Kormak had to strike; he struck, and Bersi parried with Hviting. Skofnung cut off its point in front of the ridge, and the sword-point fell on Kormak's hand, and he was wounded in the thumb, whose joint was rent, and blood came on the cloak. Thereupon men intervened, and did not want them to go on fighting. Kormak said, 'It is a little victory which Bersi has got from my accident, though we part now.'"

Sometimes the dueling place was marked with stones. "There the place of the holmganga was marked by stones placed in a ring around it . . . He went inside the marks of the duelling place, but Ljot was not ready. . . . Ljot came forward and pronounced the law of the holmganga, that he who stepped beyond the mark-stones which are set around the place of holmganga should ever afterwards be called a coward."

From the first account it will be seen that the duel was not necessarily to the death. The whole affair had a formal and legal quality. Also, and this was important, the winner (at least in the old days) was not held accountable, and did not have to pay any indemnity (weregild). In fact, to quote Egil's Saga: "... if he fell in the holmganga he should forfeit all his property, and he who killed him was to take all the inheritance."

Many of the deaths recorded in the saga can only be classed as murders. Here again the similarity can be drawn between the Scandinavia of those days and the American West. Most of the chivalrous "Ah'm a'goin' for mah gun, yuh hoss-thief" is pure Hollywood. When the noted killers of the frontier days (those now idolized by young America) set out to kill a man, they killed him, with no nonsense about it; and if their victim happened to have his hands in his pockets and his back turned, so much the better.

In the days of the Vikings, such killings — and many justifiable ones — usually started a chain reaction of revenge killings which made the blood-feuds of the Kentucky mountaineers look like a tea party. These blood-feuds were common to most barbarous and semi-civilized peoples, and it was to avoid the appalling slaughter — and consequent danger to the security of the tribe through loss of manpower — that in most such societies a system of blood-money payments was instituted, carefully graded in proportion to the status of the dead or injured, and to the extent of their injuries.

Among the Norsemen these laws relating to the paying of weregild were most complicated. An injury or killing at once became a family affair, and the payments of weregild (or the continuance of the feud) devolved on its members.

The sequel to the slaying of the outlaw Grettir the Strong in Iceland by Thorbjorn Angle is an example of the lengths (or distances) to which a relative would go to wipe out a blood debt. Grettir's brother, Thorsteinn, lived in Norway, a quiet man of much property. Thorbjorn went to Norway, but fearing reprisals, journeyed to Micklegard (Constantinople) to serve the Emperor of Byzantium. Hearing of

this, Thorsteinn made over his property to his kinsmen, and followed. He also joined the Varangian Guard—that famous corps, made up of Scandinavians or Norse-English, who formed the personal bodyguard of the emperors of the East—and at the earliest opportunity slew Thorbjorn with Crettir's own sword, which the killer had been proudly displaying.

Afterward, Sturla the Lawman was to say that one of the three things which would make Grettir remembered above all other outlaws was that he was avenged in Micklegard—"a thing which had never

happened to any Icelander."

It was not uncommon for one of the parties to the dispute, displeased at the result of the arbitration, to plot revenge at a later date, thus starting the whole bloody cycle over again. For while the Norse had laws in plenty, there was no means of enforcing them. The famous "Things," although a great stride forward in man's striving for self-government, were by no means perfect in operation, and frequently justice went to those who brought to the meeting the largest following of armed men. Every man, therefore, had at all times to be ready to stand up for himself. Even the most peaceful bondi, (landowner) when pushed too far by greedy neighbors or overbearing king, would take his weapons down from the wall. It was this sturdy independence, coupled with the almost universal familiarity with weapons, that made the Scandinavians such formidable opponents on the field of battle.

The Norsemen's love of weapons and warfare, and their respect for famous warriors and great feats of arms was intensified by their religious beliefs. As might be expected, theirs was a martial faith, full of fighting, treachery, and death, with warrior-gods and helmeted shield-maidens. The happiest fate which could befall a fighting man was to die on some wellfought field, over which rode the watchful Valkyrie, the choosers of the slain. These helmeted maidens, with glittering brynjas and bloody spears, were sent by Odin to every battle, to choose those among the dead worthy to dwell forever in Valhalla. Here, in the hall of the selected heroes (val means chosen) the mighty warriors drank and feasted, waited on by the beauteous Valkyrie. In the daytime they fought, but at nightfall their wounds were healed and slayers and slain sat down at table as before. At Ragnarok, the final battle - when the gods go up against the forces of evil; when the dread Fenris wolf is freed, and the world goes down in blood and fire, these heroes, with weapons drawn, will follow Odin's banner into their last fight.

Five hundred doors and forty more I think are in Valhalla: Eight hundred heroes go through a door at once When they go to fight the wolf.

There was something of the fatalism of Islam in the Norse religion. The three Norns, who sat spinning the threads of destiny at the foot of the world ash tree, ruled the lives of men and gods. They represented the past, the present, and the future.

"Thence came three maidens,
Knowing many things,
Out of the hall
Which stands under the tree:
One was called Urd,
Another Verdandi,
The third Skuld;
They carved on wood tablets,
They chose lives,
They laid down laws
For the children of men,
They chose the fates of men.
They disturbed the peace of the
golden age of the gods."

Everything was pre-ordained, and it was not considered seemly for a man to struggle against his fate. It was a sad end for a warrior to die peacefully in bed. Many an old chieftain was helped into battle so that he could die, weapon in hand and so win his place in Valhalla.

A not-inconsiderable factor in the fighting spirit of the Norsemen was the part played by the poets or scalds. These bards—the historians, press agents, and war correspondents of their time—often accompanied the Norse leaders on their campaigns, and their accounts of the battles in general, and the performance of the individual warriors in particular, were sung or recited throughout the northern lands. No fighter likes a "bad press," and the praise or blame of the scalds (who might themselves be soldiers of no mean ability) could make or break a warrior's reputation. Battling under the watchful eyes of such men, the Norsemen did their utmost, aware that the slightest show of weakness would be recounted around countless hearth-fires in the long winters to come.

"It is said that King Olaf (before the battle of Stiklastad, 1015–30) arrayed his men, and then arranged the shieldburgh which was to protect him in the battle, for which he selected the strongest and most valiant men. He then called his scalds and bid

them go into the shieldburgh. 'You shall stay here,' said the king, 'and see what takes place, and then no Saga is needed to tell you afterwards what you shall make songs about!'"

A man whose life was spent in war and preparation for war, and whose hope for eternity depended on his prowess as a warrior has a considerable advantage over one with a less martial approach. Besides their great fighting ability, they had equality in weaponry, superiority in mobility, equal or better military organization, and because of these last two factors, often had a superiority in numbers at the point of impact. Their ruthlessness and savagery had the effect of weakening the morale of their enemies (an effect probably carefully calculated) - a morale already lowered by the repeated victories of the Norsemen. While we know little of their overall generalship, their leadership on the company level was excellent -relying as it did usually on the captain-and-crew unit, a formation held together by some degree of comradeship and responsibility, and headed by a tried and resourceful leader.

Where land campaigns against other Scandinavians were undertaken (and there was almost constant fighting between Norwegians, Swedes, and Danes, as well as more localized warfare) units were led by their chiefs. These detachments (sveiter) were formed into larger groups called fylkings. There does not seem to have been any set number of men in these groups. Each fylking had its standard. One battle formation often used was the svinfylking, or swine-array. This seems to have been a triangle or wedge, with the best warriors at the apex.

King Olaf made the following speech to his host before the battle of Stiklastadir (1030): "We have a large and fine host. Now I will tell you how I want to array my men. I want to let my standard move forward in the middle of the host, and my hird shall follow it . . . to the right of it Dag Hringsson shall stand, and the men with whom he joined us. He shall have another standard. To the left of my fylking shall stand the men from the King of Sweden . . . they shall have the third standard. I want my men to form detachments, and friends and kinsmen shall stand together, for then each will defend the other best, and they will know each other.

"We shall mark our men by making a war-sign on our helmets and shields, namely, paint on them the holy cross in white.

"... we must have thin arrays if we have fewer men, for I do not want them to surround us.

"Now form sveiter. Then the sveiter shall be put

together to form fylkings, and each man must then know his place, and mind in which direction he stands from the standard to which he belongs . . ." (St. Olaf's Saga)

Men fighting in close ranks marched shoulder to shoulder, so that their shields formed a wall. This shield-wall or shieldburgh, was also used when in the defensive, a closed ring being formed about the standards.

In the year 1066 Harald Hardrada fought the great battle of Stamford Bridge against Harold of England.

"Harald put up his standard, the Land-Waster, and arrayed his host, and made the line (fylking) long, but not thick; then he bent the wings (arms) backwards, so that they met each other; it was a wide thick circle, equal on all sides; it had shield against shield on all sides, and shields above also. The array was thus formed because the king knew that the horsemen were wont to rush up in small squads (ridil) and draw back at once; the king's guard, very picked men, were inside the circle, the archers also, and Tosti with his men. Then the king ordered the jarl to go forward where it was most needed. 'Those who stand outermost in the array,' he said, 'shall put the handles of their spears down on the ground, and the points against the breasts of the horsemen if they attack; those who stand next shall direct their spear points against the breasts of their horses; keep the spears thus everywhere that they cannot advance; let us stand firm and take eare not to break this array."

Hardrada was a great warrior. He fought his first battle at the side of his brother King Olaf at Stiklastadir when he was fifteen years old. When he fell at Stamford Bridge he was fifty and in the intervening thirty-five years he had fought in many lands—"all that time uproar and war were his pastime." It is indicative of the wide travels of the Norsemen that he and his followers fought in Africa, the Near East, Sicily, Italy, Greece, and Bulgaria. He was for some years in the service of the Emperors of Byzantium.

Excerpts from the old Frankish annals tell of Norse inroads into Spain: "The Northmen, having advanced by the Garonne as far as Toulouse, plundered with impunity the region on every side; a detachment proceeded thence into Galicia, and there perished—some from the bowmen sent against them, and some in a storm at sea; but others, penetrating farther into Spain, had long and severe battles with the Saracens; but at length were vanquished, and retreated."

Mediterranean France and Italy were also subject to their attacks: "The Danish pirates having made a long circuit by sea, for they had sailed between Spain and Africa, enter the Rhone, plunder many cities and monasteries, and establish themselves in the island called Camargue."

Later these same Danes steered for Italy and sacked several cities, including Pisa.

Small raiding parties usually avoided walled places, but as the following excerpts from the Narrative of Abbon show, if the Northmen were in great strength, and thought the prize worth the effort, they were capable of making a serious and sustained assault. The occasion is one of the attacks on Paris – this time a major siege, which lasted intermittently from November 885 to May 887. The invading host was evidently in force:

"Seven hundred sailing vessels and innumerable smaller ships . . ."

The attackers were obviously acquainted with the military machines of the day:

"The Danes then make, astonishing to see, three huge machines, mounted on sixteen wheels—monsters made of immense oak trees bound together: upon each was placed a battering ram, covered with a high roof—in the interior and on the sides of which could be placed and concealed, they said, sixty armed men with their helmets."

To proteet themselves from the arrows and stones of the besieged the Norsemen used mantlets:

"From the hide torn from the neck and back of young bulls, the Danes then made a thousand bucklers, each one of which would cover four or six men even."

The assault, using the bucklers, is described:

". . . they advance with their backs bent under the bows: (i.e. under the arrows from the Parisian's bows) the missiles quiver on their shoulders, their swords cover the ground, their shields hide from sight the waters of the Seine; thousands of leaden balls, seattered like a thick hail in the air, fall upon the city, and powerful catapults thunder upon the forts which guard the bridge."

Like many fortifications in Western Europe in those days, the towers were made of wood, and naturally

the Vikings attempted to burn them:

"Their ill-omened ranks tried in vain to fill up even a single ditch, or to prostrate the tower with their battering rams. Furious at being unable to get us in open field, the Northmen take three of their highest vessels, quickly fill them with whole trees with their leaves on, and set fire to them. The East wind gently moves these ships vomiting flame, and with ropes they drag them along the banks to destroy the bridge and burn the tower. . . ."

A different approach was made in one of the numerous attacks on London. Wooden bridges spanned

the Thames "so broad that wagons could pass each other on them. On the bridges were bulwarks, which reached higher than a man, and beneath the bridges, piles were driven into the bottom of the river. When the attack was made the whole host stood on the bridges and defended them."

At the time of this assault, London was held by the Danes. Olaf of Norway was aiding Ethelred to re-

gain his throne.

"Olaf had large hurdles made of withies and soft wood, so cut as to make a wicker-house, and thus covered his ships, so that the hurdles reached out over their sides; he had posts put beneath them so high that it was easy to fight beneath them, and the covering was proof against stones thrown down on it. When the host was ready they rowed up the river; as they came near the bridges they were shot at, and such large stones thrown down on them that neither their helmets nor shields could withstand them; and the ships themselves were greatly damaged, and many retreated. But Olaf and the Northmen with him rowed up under the bridges, and tied ropes round the supporting posts, and rowed their ships down stream as hard as they could. The posts were dragged along the bottom until they were loosened from under the bridges. As an armed host stood thickly on the bridges, and there was a great weight of stones and weapons upon them, and the posts beneath were broken, the bridges fell with many of the men into the river; the others fled into the city, or into Southwark."

Norsemen varied greatly—one band might be composed of filthy, howling savages from some Baltie backwater, while others might have spent years in Constantinople, that most cosmopolitan of cities. Nor were all completely uncivilized in their dealings with their enemies. The following is from *Orvar Odd's Saga*. (It is to be supposed that the laws applied only to raids against other Norsemen. It is hard to reconcile Hjalmar's rules of conduct with the accepted pattern of Viking behavior.)

"Hjalmar said: 'I will have no other Viking laws but those I have had hitherto.' Odd replied: 'When I hear them I will know how I like them.' Hjalmar said: First I will never eat raw food, nor shall any of my men, for it is the custom of many men to squeeze meat under their clothes and then call it cooked; that is acting more like wolves than men. I will never rob traders or boendr (landowners) except when I must make a raid upon land for my men when in need, and then I will pay full value. Never will I rob women, though we find them on land with much property, nor

shall women be brought on board against their will; if a woman can show that it has been done against her will, the man shall lose his life for it, whether he is powerful or not."

Scandinavians in the Viking Age did little building in stone. Even the king's halls and buildings were of wood. Fire was a favorite, and natural, weapon and the burning of a home or hall, with the owner and his retainers inside, was a common occurrence. As a general rule, it was customary to allow women, children, and servants, and sometimes members of the family not involved in the feud, to escape. The others had their choice of being burned or suffocated, or cut down as they emerged.

"The watchmen of Thorolf sat inside drinking, and nobody was on the watch. The king (Harald Fairhair) surrounded the hall with a circle of men; then they raised a war-cry, and a blast was blown on the king's horn. When Thorolf and his men heard this, they rushed for their weapons, for all the weapons of every man hung above his seat. The king had proelaimed at the door of the hall that women, young men, old men, thralls and bondmen should go out. Sigrid, wife of Thorolf, the women who were inside, and the men who were allowed, went out . . . The King said 'You must set the hall on fire; I will not lose my men in fighting against him outside, for I think he will cause us a great loss of men if he gets out, though he has fewer men than we.' Then fire was set to the hall, and it burned quickly, for the timber was dry and the walls tarred, and the roof was thatched with birch-bark. Thorolf bade his men break off the wainscoting, get at the gable-beams and break the weather boards. When they got hold of the beams, one of these was taken by as many men as could get hold of it, and pushed out at the corner so strongly that the clamps fell off outside, and the walls broke, leaving a large opening. Thorolf went out first, then Thorgils Gjallandi (loud-speaking) and all, one after the other. A most severe fight began . . .'

From *Njal's Saga*, one of the great Icelandic sagas, comes the following.

"Flosi said: I will offer thee to go out, Njal bondi, for thou deservest not to be burnt.' Njal said: I will not go out, for I am an old man, and little able to avenge my sons, but I will not live with shame.' Flosi said to Bergthora: 'Go out, housewife, for I will by no means burn thee.' Bergthora answered: I was young when I married Njal, and I have promised him to let the same overtake us both.' Then they both went in . . ."

A more pleasant custom, and one which points up

the attitude of the Norse toward war, was the staking out of a field of battle and the appointing of a set time for the conflict. It was also customary to forbid any pillaging before the battle.

"It was the law of King Heidrik, that if a host of foes came into a land, and the king of the land enhazeled a battle-field and appointed the place of the battle, the Vikings should not plunder before the battle was fought."

This duel-like approach is typical of primitive warloving peoples—those who enjoy fighting for its own sake. War like this was no "extension of policy"—it was a great jamboree, to which men went in high glee, as to a feast or a drinking-bout.

When hostile armies or fleets met a red shield was raised. A white shield, on the other hand, meant peace, or at least a parley. Another ancient custom was the throwing of a spear or the shooting of an arrow over the host. This dedicated the warriors to Odin, and also served as a sign for the battle to commence. The onset was also heralded with a great blowing of horns.

The traditional way of summoning the men of the land to war was to send around the war-arrow.

"When a man carried war-news he shall raise an iron arrow at the end of the land. That arrow shall go with the lendirmen (a lendirman, or landman was a local official and nobleman, perhaps equivalent to an English knight of the shire) and be carried on a manned ship both by night and by day (i.e. never stop) along the high road (meaning the sea) . . . Every man in whose house the arrow comes is summoned within five days on board a ship. If any one sits quiet he is outlawed, for both thegn (noble) and thrall (serf) shall go."

It is a certainty that the great majority of Scandinavians never voyaged across the sea. They stayed at home, fished, hunted, raised crops, and children, just as most peoples with an agricultural and a maritime economy did; and had done, for centuries. But their close commerce with the sea had taught them over the centuries how to design and build boats suited to the rough northern waters, boats which could be rowed in the fjords or river mouths, or sailed when the howling blasts from the North made rowing impossible.

The typical vessel of the Norsemen—the Viking ship—has been minutely described elsewhere (and here let us give thanks to those worshipers of Odin who believed that it was better for a man to be shiplaid, or mound-laid, than to be carefully placed in his favorite long ship, surrounded by his dead followers [with a sizable proportion of his ill-gotten gains] and

sent blazing out to sea). For it is from the ship-mounds; where an entire vessel, with its owner and his personal possessions was buried intact, that we have learned most about the craft in which the Norsemen not only raided all of Western Europe and parts of the Mediterranean and Africa, but colonized Iceland and Greenland and even America itself.

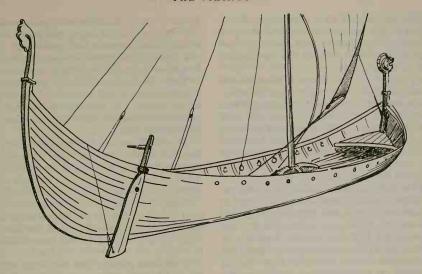
In general, the Viking craft were long, narrow, flat-bottomed vessels, with considerable sheer (that is, they rose rather steeply at bow and stern). They were mostly open, with a small deck at bow and stern. The stem pieces usually terminated in a carved dragon's head (the stern sometimes had a tail carved on it). This dragon's head was often removable and would be taken down when approaching a friendly harbor.

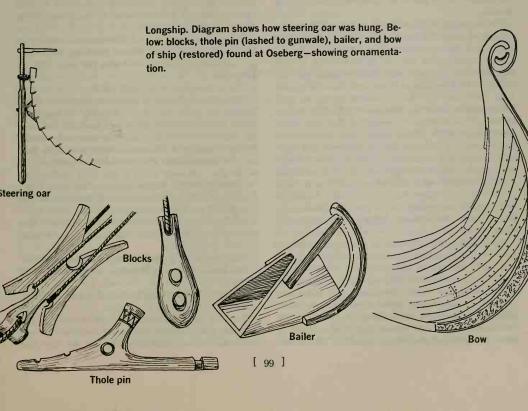
The Norse long ships were propelled by both sail and oar. The sail was square and was made of woven material, usually vadmal, a coarse woolen stuff, or sometimes of leather. Very often, it was painted, or made up of lengths of cloth of two or more colors. Occasionally some great chief would have an emblem embroidered on it. When Sigurd Jorsalafari (Jerusalem faring) went to Micklegard it is said that he lay to, and missed two weeks of favorable wind, until a beam wind enabled him to show off his velvet-lined sails to the Byzantines.

Whether the Norse understood the art of tacking (that is, beating to windward) is not known. It is probable that they did. Long experience must have taught them that by stretching the square sail as nearly fore and aft as they were able, they could make a little headway, even if the wind were slightly forward of the beam. A pole called the beitass was used to stretch the forward edge so as to lie as flat as possible and bowlines were also used for the same purpose. On the other hand, it is obvious that they were not fully aware of the implications of such a means of sailing, or they would have modified both the rig and the design of their vessels. For such ships as the Vikings used would have made tremendous leeway, and the square sail alone is only efficient with the wind abaft the beam.

Norse ships were of two main types, the trading vessels (knerrir) and the long ships. Of the former we know little, but from various mention in the sagas we gather that they were shorter, higher (the great Ormen Lange — Olaf Tryggvason's famous long ship — had sides as high as a knorr) and better able to withstand heavy weather.

"Hakon answered that the seas to the island was hard to cross, and the breaker strong; You cannot go on long ships thither, but I will have two





knerrir made for you, and get a crew to man them."

They may have been decked over and Bjorn Lanstrom (*The Ship*) believes that the *knerrir* had a straight stem and stem – unlike the curved stem

and stem of the long ships.

The long ships seem to have been of several classes. These were the *dreki* (the dragon ship), the *skeid*, the *snekkja*, the *skuta*, the *buza*, and the *karfi*. These ships seem to have been similar in shape and build but differed only in size. They were rated according to the number of oars—the dragon ship being the largest. On the smaller types each oar was pulled by one man, although on occasion they may have been double-banked for short spurts.

One of the most famous of the ship finds was the Gokstad ship. This ship-mound was discovered in 1880 and enclosed a 32-oared ship, 76½ feet from stem to stem, and over 17 feet in beam. It is of the small type called a karfi—yet a replica built in 1893 sailed across the Atlantic in twenty-eight days. She is reputed to have handled well, and to have proved very seaworthy. It is reported that on occasion she made 11 knots. When found the Gokstad ship had the remains of a tall chieftain (6'3" on board, and the bones of many sacrificed horses were found in the mound.

The oar-holes in the Gokstad ship are 381/2 inches apart, and from this the lengths of other Norse long ships have been estimated. The Ormen Lange, the Long Serpent, was said to have had 34 rowing benches (68 oars) and was possibly some 150 feet overall. The King's Sage states that she was 74 ells (122 feet) long "on the grass" that is, on the keel. The space between the benches were called rooms, to each of which spaces several of the crew were stationed in battle. These rooms were divided into half-rooms. It is said that the Long Serpent had eight men in each half-room. This, with the stem defenders and the men on the lypting - the low afterdeck - would have brought the total to more than six hundred. This is too many for such a vessel-four hundred would have crowded her - but it is obvious from the accounts that as many fighting men as possible were carried.

The Norse made little use of seamanship when a battle was in the offing. There seems to have been no systematic attempt at ramming—nor was the high curved stem suitable for such an attack. We are told that at least one vessel (<code>jarnbardi</code>) had what was probably an iron reinforcement, or perhaps iron spikes on her stem, but there was nothing comparable to the beak-heads of Greek or Roman ships. Ships appear to have been grouped in fleets or squadrons for tactical

purposes, but as far as we know, no formations were kept. When about to engage the larger ships were usually lashed together and made what amounted to a fighting platform. Thus men could pass from one to another and reinforce the line where needed.

"King Olaf signalled by horn to lay the eleven ships together which he had there. The Long Serpent was in the middle, with the Short Serpent on one side and the Crane on the other, and four other ships on each side of them. . . .

"King Olaf's men now tied together the ships as bid; but when he saw that they began to tie together the stems of the Long Serpent and the Short Serpent, he called out loudly: 'Bring forward the large ship; I will not be the hindmost of all my men in this host. . . .'

"Then Ulf the Red, the king's standard bearer and stem defender, said: 'If the Serpent shall be put as much forward as it is larger and longer than the other ships, the men in the bows will have a hard time of it. . . .'"

In the above passage, from *Olaf Tryggvason's Saga*, we read how the King arranged his vastly outnumbered ships in his last great battle at Svold, in the year 1000. The enemy fleet, Danes, Swedes, and rebellious Norwegians, attacked by squadrons in turn (presumably for lack of room to maneuver all at once). As Ulf predicted:

"King Svein's men turned their stems as thickly as they could towards both sides of the Long Serpent, as it stood much further forward than the other ships of King Olaf . . ."

Missile weapons were freely used.

"Now Einar Thambarskelvir was aboard the Long Serpent aft in the main-hold (possibly the space between the edge of the after-deck and the first rowing bench) and he shot with the bow and was the hardest shooting of all men. Einar shot at Eirik Jarl, and the arrow smote the tiller-head above the head of the Jarl, and went in up to the shaft binding . . .

"Then spake the Jarl to a man whom some name Finn... and he was the greatest of bowmen; and he said 'Shoot me yonder big man in the strait hold.'

"So Finn shot, and the arrow came on Einar's bow even as he drew the third time, and the bow burst asunder in the midst.

"Then spake King Olaf: What brake there so loud?" "Answered Einer: 'Norway, King, from thy hands . . ."

Anchors and grappling-hooks were used to bring and hold enemy ships alongside.

". . . for the stem-defenders hooked anchors and grappling-hooks on to King Svein's ships, and as they could strike down with their weapons, for they had

much larger and higher-boarded ships, they cleared of men all the Danish ships which they had laid hold of."

Fiercely as Olaf's picked champions fought, the battle could have only one outcome. By taking the smaller ships on either side of the Long Serpent and cutting them loose, the King's foes finally confined the survivors of the crews to the Long Serpent.

"The jarl first came alongside the farthest ship of King Olaf on one wing with the Janbardi, cleared it, and cut it from the fastenings; he then boarded the next one, and fought there until it was cleared . . . At last all Olaf's ships had been cleared except the Long Serpent, which carried all the men who were able to fight . . ."

The fight now was very fierce. The Long Serpent's higher bulwarks gave King Olaf's men a great advantage, but:

"Such a shower of weapons was poured upon the Serpent that the men could hardly protect themselves against it . . . Hard and bloody was the defense of the foreroom men (the foreroom was the space just aft of the foredeck) and the stem-defenders, for in both those places the gunwale was the highest and the men picked. When the fall of men began on the Serpent it was first amidships, mostly from wounds and exhaustion, and men say that if these brave men could have kept up their defense the Serpent would never have been won."

Nevertheless many attacks were beaten off. Then the Jarl asked the advice of a wise veteran.

"Thou must take large timbers, and let them fall from thy ship upon the gunwale of the Serpent, so that it will lean over; you will then find it easier to board the Serpent, if its gunwale is no higher than those on other ships." (The translation "gunwale" is, of course, an anachronism—the English word did not come into being until the earliest cannon were used aboard ship, aimed over the uppermost wale, or plank.)

This was done and "the Serpent began to lean over very much when the large timbers were dropped on one gunwale, and thereupon many fell on both sides."

The battle ended with most of the survivors of the Serpent's crew jumping overboard rather than surrendering.

"But, because so much folk of the earl was gotten aboard the Serpent as the ship might well hold, and his ships also lay close all round about the Serpent, and but a few folk were left for warding her against so great an host, now albeit those men were both strong and stout of heart, yet there in short space fell the more part of them. But King Olaf himself and Kolbiorn (the marshal) leapt overboard, either on his

own board; but the earl's men had put forth small boats and slew such as leapt into the deep. So when the king himself leapt into the sea they would have laid hands on him and brought him to Eirik Jarl; but King Olaf threw up his shield over him, and sank down into the deep sea."

Even when fleets were more equal there was little maneuvering. Both sides went for each other hammer-and-tongs. In the battle at Svold it would seem that only Olaf's few ships were fastened together, but on other occasions both sides did so. The Battle of Nisaa (1062) was fought between Harald Hardrada of Norway and King Swend of Denmark.

"Then, on both sides they bound the ships together through all the middle of the fleets, but as they were so large, very many ships remained loose and each laid his ship forward according to his courage and that was very unequal . . . Hakon Jarl and the ships that followed him did not make fast their ships in the fleet, but rowed against the Danish ships that were loose, and slew the men of all the ships they came up with . . . The Jarl went on in this way all night, coming forward where he was most wanted. . . ."

This mobile reserve had much to do with Hardrada's victory.

". . . in the winter the talk of the countryside was that Hakon Jarl had won the battle for the king, and the latter was very jealous and attacked Hakon but did not secure him."

While ships fastened together could offer a formidable defense they were at a disadvantage if it became necessary to beat a retreat.

"The ships that were bound together could not be cast loose, so the people who were in them sprang overboard and some go to other ships which were loose and all King Swend's men who could get off rowed away, but many of them were slain. Where the king himself fought the ships were mostly bound together and there were more than seventy of King Swend's left behind."

In almost all instances the great sea battles of the Norsemen were fought against each other. With the exception of a few of the Saxon kings in England, notably Alfred, King of Wessex, there seems to have been no organized attempt at raising a fleet capable of meeting the Vikings on their own terms. Whatever naval actions these monarchs won were on a small scale – the defeat of a small pirate squadron or two – and no English fleet was ever capable of ensuring the safety of the kingdom. Nor were the vessels of any other Western kingdom, and the fleets of Scandinavia held undisputed control over the seas

of northern Europe for more than two centuries.

These then were the Norsemen. Physically and mentally tough from the sheer act of survival in a hard, cruel land, they lived only for war, and therefore were as proficient with weapons and in all martial skills as a lifetime of training and actual use could make them. Spurred on by greed and love of adventure to despoil any of the softer peoples who lay within their reach, they professed a faith which held human life as nothing, and which glorified the man of blood as the epitome of everything noble and honorable.

To the people of their age they appeared as fiends incarnate—a living tide of cold-eyed horror, which roared up again and again, irresistible, each succeeding wave sweeping away the few broken fragments which the previous one had missed. No power ever

checked them permanently, and it was not until the flood dried up at its source that Western civilization could draw breath once more.

History has a habit of throwing a rosy light on the past, and today we honor the hardiness and valor of the Vikings, while dismissing their butcheries. It is as warriors, not humanitarians, that we must judge the fighting men of the ages—and as men-at-arms, as seamen, and as adventurers the Norsemen have had few equals.

Then skoal to the Vikings! - may they live happily forever where:

The hall is roofed with shafts; It is thatched with shields; The benches are strewn with brynja.



BYZANTIUM

the Norsemen) dominated Western Europe, throughout the latter part of the first millennium there stood guarding the Eastern gate of the European continent an army which for its discipline, organization, and often its leadership, was without a doubt the finest in the world. This force, the troops of the Eastern Empire, have received little acclaim over the centuries. The word Byzantine conjures up impressions of decadence; of craft and guile, treachery and deceit. Yet for centuries, whatever the shortcomings of the Byzantines themselves, a small professional army held the marches of the East against Persian, Arab, Turk, Avar, Bulgar, and Slav. The sorest blow was dealt by the men of the West them

selves, a stab in the back for which Christendom was to pay dearly. And when at last Constantinople fell to the Turks, there fell with it not only a bastion of the Cross, but a great symbol—a continuity of thought and civilization which stretched back over a thousand years.

That great, though prejudiced, historian Gibbon is in part responsible for the poor reputation of the Byzantine soldier. "The vices of Byzantine armies were inherent," he wrote. "Their victories accidental." This is a gross libel on an organization which could boast of nearly five centuries of almost constant warfare—and almost constant victory—and of whom an Emperor wrote, "The commander who has six thousand of our heavy cavalry and the help of God will

need nothing more." It is true that the great pressures of mass invasions finally reduced the Empire to a size where it could no longer sustain itself, but that it did maintain itself as an entity even in adversity until the middle of the fifteenth century says much for the steadfastness of its soldiery and the sagacity of their leaders.

In this task the Empire had the aid of a fleet second to none. As Montross in his War Through the Ages writes:

"The effectiveness of the East-Roman navy may be measured by the fact that it became virtually a fleet without a history. Over a period of six centuries its supremacy was challenged on only two occasions. No better test could be found, for the worth of a fleet is best established by its results as a preventative rather than a curative instrument of strategy."

In an age of armed mobs led by individual heroes, the armies of the Eastern Empire preserved a science and discipline completely beyond the comprehension of the rude warrior-chiefs of the West. While the petty kings of the North were sitting guzzling mead in their rough log halls—surrounded by their savage huscarles and hirdmen—the military leaders of the East were writing learned treatises on the art of war: treatises which took into consideration not only tactics and strategy, but engineering and supply—things practically unheard of in the West—and even the national idiosyncrasies of the various nations they might be called upon to meet.

It may be justly remarked that battles are not won by military writers and that the most complete compendium of martial knowledge does not make a victorious army. Fortunately for the Empire its officers usually were able successfully to unite theory with practice—a combination which has carried many a numerically inferior force to victory.

The leaders of the Eastern Empire, though usually outnumbered, won their battles by the careful choice of the right arms (or combination of arms) and tactics with which to oppose a specific opponent. There was a flexibility about Byzantine tactics and formations which was totally lacking in those of their enemies. An Imperial commander could usually correctly gauge his opponent's worth, his probable tactics, and the reason and direction of his attack. He could then gather a force of the requisite arms and sufficient numbers (the Empire suffered from a chronic shortage of manpower) to accomplish the operation.

Before examining the military power of the Byzantines in detail it should be pointed out that the objectives of the Imperial troops were, in general, to defend territory rather than to take it. Their opponents were usually mounted, and so it was natural for the defenders to put their greatest strength in an arm which permitted the swiftest concentration of force in the shortest possible time. The infantry was not by any means neglected, but as the defenders of the long lines of the old Empire in the West had found out, the armored infantry unit was too slow to catch and bring to action an invading army composed mainly or entirely of horsemen.

The armies of the early days, up to and including the time of Justinian (527-565) were, like the armies of the West, composed largely of foreign (mostly Teutonic) auxiliaries, or feodorati. This policy of setting a thief to catch a thief had its advantages, but it was also a dangerous expedient - as the foreigners held allegiance only to their own chiefs or the general in whose army they served - and by whom they were paid. Furthermore, it represented a continual drain of money, and money was always in short supply. Great as were the victories of the armies of Justinian under such leaders as Belisarius and the aged eunuch Narses, the Byzantine army took the general form which it was to keep almost unchanged for centuries from the reforms of Maurice (582-602), general and later emperor. This wise soldier, author of the famous Strategicon, (a sort of manual for general officers) did away with the system by which the loyalty of the troops was to their general first and the emperor second. By putting the appointment of all officers above the rank of centurion into the hands of the central government, he deprived the army and divisional commanders of a great source of patronage and power. He also did away with the great bodies of personal retainers maintained by the generals, an outgrowth of the small general's bodyguard of the days of the Roman republic, and of the household "companions" of the Romanized barbarian leaders of the Western Empire's declining years. It is said that the personal retainers of Belisarius numbered some six thousand.

By increasing the recruiting of soldiers from within the Empire — Armenians and Isaurians (that region in Asia Minor roughly corresponding to Southern Anatolia), Thracians and Macedonians — the number of foreign mercenaries was greatly reduced. This not only ensured more loyalty to the central government but allowed the restoration of a strict discipline, a thing impossible to attain where loyalties were divided and where a commander's personal popularity was purchased by the relaxation of order. There was a resumption of the old system of camp and field fortification, and the new Byzantine armies became almost as noted for their digging as the legionaries of Rome.

The mainstay of the Byzantine army was the heavily armed and armored horse-archers, the *cataphracti*. These were equipped with a steel cap with a small crest; a long shirt or hauberk of scale armor, reaching from the neck to the thighs; gauntlets and steel shoes. A surcoat was often worn over the mail. Mounts of officers and of front-rank men were armored with chamfron and poitrail. Each man earried a long lance with a pennon (different units had crests, surcoats, and pennons of a distinctive color), a bow and quiver, a broadsword and a dagger. A woolen cloak was strapped behind the saddle.

Shaped saddles were now in use, instead of the pad or blanket and surcingle of earlier days. At some time, perhaps during the fifth century, a major step in the development of the cavalry arm came with the adoption of the stirrup. It is safe to assert that this most useful piece of equipment doubled the efficiency of the mounted man. By insuring a firm seat, it allowed the full use of shock tactics; the long lance could now be used effectively and no longer could a foot soldier easily pull a rider off his horse by grabbing his leg—an important factor in a mêlée. Why so necessary and obvious a piece of equipment was so long in appearing is not known, but they are first mentioned in the *Strategicon*, although the reference infers that they had then been in use for some time.

The light cavalry trooper was not so completely armored, but carried a large shield (which the mounted archer could not). He was armed with lance and sword.

The infantry were also of two classes. The heavy infantry, the *scutati*, wore a crested steel helmet and a short hauberk and carried a large shield. These shields, like their crests, were the color of the regimental banner. They bore a lance and sword and a heavy battle ax with a spike at the back.

The light infantry were archers. Their bows were larger and more powerful than those of the *cata-phracti*. We have no details of these weapons but, describing the horse-archer of the time of Belisarius, the historian Procopius wrote:

"... They were expert horsemen, and are able without difficulty to direct their bows to either side while riding at full speed, and to shoot an opponent whether in pursuit or in flight. They draw the bowstring along by the forehead about opposite the right ear, thereby charging the arrow with such impetus as to kill whoever stands in the way, shield and corselet alike having no power to check its force."

There were a number of attendants, who were presumably armed in some fashion. One was provided for every four cavalrymen (he would probably have acted as horseholder in a dismounted action) and every sixteen infantrymen also had one who drove a cart containing among other things: "a hand-mill, a bill-hook, a saw, two spades, a mallet, a large wicker basket, a scythe, and two pick-axes." In country unsuitable for wheeled transport, this impedimenta was carried by pack animals.

There was also an ambulance corps, with bearers, and surgeons, and a quartermaster corps in charge of supplies. This large train of vehicles and attendants was well-organized—under the care of specially assigned officers.

The tactical unit of the Byzantine army of Maurice's time was the *tagma*—a band of troops, corresponding to the old vexillum, of three or four hundred men. Each century had ten *decurys*. This unit was commanded by a *comes* or military tribune. Three or more *tagmas* made a small brigade, and three brigades a *turma*. These higher units were of different strengths, to confuse the enemy as to the numbers of the whole army—a device afterward used by Napoleon for the same purpose.

For purposes of military administration and defense, the Empire was divided into regions, called themes. The troops stationed in each theme made up, at least in theory, a complete self-sustaining force. It was capable of beating off an enemy raid (it must be remembered that a great part of the attacks on the Empire amounted to little else) or of supplying troops (though no theme would be completely stripped of defenses) for an expedition, or to support those of other themes hard-pressed by an invasion in force. Naturally the frontier regions had stronger forces assigned to them than those of the interior.

The Byzantine army believed in quality over quantity (any Imperial commander expected to be heavily outnumbered anyway) and when troops were turned out to repell a raid or reinforce a neighboring theme, only the best-trained were taken into action—recruits and the partially fit or equipped remained in garrison.

There were security forces — well-organized intelligence and counterespionage services, and a signaling system, using beacon fires, which enabled a raid in the Taurus to be signaled to Constantinople, four hundred miles away, almost instantaneously. The light cavalry was very properly used as a source of information, and besides the reports of mounted scouts, the commander was advised "never to turn away freeman or slave, by day or night, though you may be sleeping or eating or bathing."

The tactics of the East-Romans - as noted before -

were designed to meet specific circumstances and specific opponents. We are told, for instance, that the Franks believed any form of retreat to be disgraceful, "hence he will fight whenever you choose to offer him battle." However, the Frankish cavalry "with their long lances and large shields, charge with tremendous impetus." So they should be lured into the hills, if possible, where cavalry is less efficient. Campaigns against the Franks should be protracted as much as possible as "after a few weeks without a battle his troops... will grow tired of the war and ride home in great numbers."

The carelessness of the Franks in outpost duties is also noted, and their indiscipline. Pretending flight and then turning on their disordered ranks is con-

sidered a good ploy.

On the other hand, the "Turks," by which were meant the Magyars and kindred tribes, whose forces were made up of many troops of light cavalry armed with the bow, were noted for strategems, but could be ridden down by the *cataphracti*. Unlike the anti-Frank tactics, it was better to charge the Magyar bowmen at once, rather than to engage them in an arrow-fight at long range.

They, and other mounted bowmen could not prevail against the archery of the Byzantine foot. Like most nomads, whose existence depended on their mounts, they were loath to risk them in attacks on the disciplined ranks of the Byzantine infantry, whose bows outranged their own and whose shafts would

wreak havoc on their unarmored horses.

Of all their opponents the later Byzantines gave the Saracens the credit for the greatest skill, both in arms and in strategy. However, although the Saracen also used the armored horseman with great effect, they could usually be overborne by the heavier Byzantine cavalry. The greatest threat which the Saracens posed was in their great numbers, and also their mobility. In fact, it became customary to destroy raiding parties when they were retreating, laden with plunder, rather than to attempt to intercept them at the outset of their raid.

Strategic points, such as fords and mountain passes, on the lines of retreat were occupied by infantry units, and efforts made to pin the raiders between the

foot and the pursuing cavalry.

The astonishing successes of the Saracens at the outset of their great military conquests can be attributed to fanatical zeal rather than superior training, armament, or tactics. As was seen as late as Omdurman in 1898, the onset of religious zealots could barely be stopped by the fire of magazine rifles and Maxims. Their impact on the East-Romans, well-trained and

equipped as they were, was irresistible. It was not until the first flush of fanaticism had worn off, that the Arabs could be dealt with. By that time, they had robbed the Empire of Syria and all North Africa. But it must be admitted that the peoples of the lost provinces, oppressed as they were by the Imperial tax collectors, and rent by schisms within the Christian church, in many cases put up but a feeble resistance.

The Imperial cavalry tactics in the field were so calculated as to deliver as many successive attacks on the enemy as possible. The cavalry forces were drawn up usually in three lines, the first, who delivered the main attack, were supported by other units in the second line, placed at wide intervals to facilitate movement of troops to and from the rear. Units in the rear, usually on the flanks, acted as reserve. On the wings were flanking troops who guarded against any turning movement by the enemy; and well out on the flanks of the enemy there were two units whose duty it was to place themselves in ambush and, when opportunity offered, to charge the enemy's flanks or rear.

This battle order was one of many, to be adopted under certain circumstances. When infantry were present they were often stationed in the center of the line, with the cavalry on both wings. In either case, the enemy was assailed by a combination of firepower and shock—worn down by archery and then subjected to successive charges of armored horsemen.

This combination was too much for most of the Empire's enemies. The unsophisticated Goths were shattered at Taginae (552) when Imperial archers, thrown forward in two wings, riddled the Gothic cavalry attacking the center. The center of dismounted spearmen held firm, while the disorganized Goths charged time and again against the rain of arrows and bristling spears. When they finally broke they carried their infantry with them and the fleeing mass was cut down by the Imperial horse, which had been held in reserve.

There is remarkable similarity between this battle and that of Crécy, although it is certain that Edward III never heard of Taginae. It is a sad commentary on the decline of the military art in the West that it took eight centuries to evolve similar tactics.

That the archer-cavalryman combination was as effective against infantry as cavalry was proved on many occasions—never more thoroughly perhaps than at Silistria (941). A Russian force of 60,000 foot, armed in similar fashion to the Vikings, and probably including many Norsemen in its ranks, was met by a mixed force of 30,000 Byzantine infantry and cavalry. The Russians, fighting in great squares or shield-

burghs, were shot down by the hundreds. When their ranks were sufficiently thinned by the arrow-storm, the armored cavalry broke into their array and defeated them with great slaughter.

Strategie and defensible spots were often permanently occupied, such frontier outposts being garrisoned by an officer and a few hundred men. The Byzantines preferred to rely on swift concentrations of troops rather than chains of fortresses, but the defenses of Constantinople itself—of which the outermost was a moat 60 feet wide and 20 feet deep—were the finest and strongest in the world.

The outer wall was a low one, a cover for archers commanding the moat, but the second was 27 feet high, with 96 projecting towers. The inner wall was 30 feet high and very thick, with 96 more towers, placed so as to cover the spaces between those of the middle wall.

The city underwent many sieges but its great walls and commanding position on the Bosphorus enabled it to beat off all attacks. Its fleets, although challenged by the rising sea-power of the Saracens, were always able to maintain communications with the Black Sea. In their struggles with the Arabs the Byzantine fleets were aided by the invention, sometime in the seventh century, of the famous "Greek fire." The formula for this deadly weapon was a closely kept secret and its actual composition remains a mystery to this day. It was probably a mixture of naphtha, pitch, sulphur, turpentine, and quickline. The use of combustibles was nothing new, but the "invention" credited to a Syrian named Callinicus, was very likely the addition of quicklime. The other materials apparently were ignited by the quicklime after water was pumped in. It was projected through metal tubes fixed in the bows of the Byzantine ships and was presumably forced out under pressure, like a modern flame-thrower. It was exceedingly difficult to extinguish, and its effect must have been devastating. However, despite the impression that it alone saved the eapitol on more than one occasion, it is certain that, useful as it was, the main credit must go to the skill of the military and naval forces of the Empire.

These forces retained their coherence and organization despite all the fantastic intrigues, assassinations, palace revolutions, turmoil, and mismanagement that a dissolute and decadent court could inflict on a longsuffering people. Assailed on every side by hosts of enemies, the Empire gradually lost ground and manpower, until it was but a shell of its former self. The final blow fell at Manzikert in 1071. The newest enemy was the Seljuk Turks. Tough, vicious, and fanatical (they were only recent converts to Islam and still burned with religious zeal) they invaded Asia Minor and were brought to battle by the Emperor Romanus. Unfortunately the young emperor, while a brave man, was no general; besides which, there was treachery in his camp-an offshoot of the factional quarrels which forever divided the ruling families. Even so, had his leadership matched his courage, so superior was the Byzantine army in discipline and training that it is more than likely that they would not have been defeated. As it was, after a day of stubborn fighting in which the Turks were at first pushed back, the coming of darkness induced Romanus to order a retirement to his camp, upon which the hordes of Turkish horsemen rallied. Romanus faced his line about, to meet the new attacks, but the rear guard, under the traitor Andronicus, continued its retreat to the camp. The furious Turkish attacks succeeded in separating the eenter from the wings, which were driven from the field. After a stubborn resistance the Emperor was wounded and eaptured and the remnants of the Byzantine force cut to pieces.

The defeat, which must rank as one of the most decisive in history, reduced the Eastern Empire to the brink of disaster, by depriving it of the Asiatic themes upon which it had relied for a great part of its manpower. The then fruitful lands of Asia Minor were reduced to a howling wilderness, the policy of the nomad Seljuks being to transform any conquered land to the condition of a steppe.

By superhuman efforts the Byzantine Empire managed to maintain itself, and at times even to win back some of its lost territory, but it never really recovered from Romanus' defeat—and when the unfortunate Constantine (a strange quirk of fate that the last emperor to rule in Constantinople should bear the name of the first) defended the city against the Sultan Mohamet II he had some eight thousand men to man walls, many of them crumbling, of some thirteen miles in circumference! Some of the great towers had garrisons of three or four men. So far had the mighty fallen.



THE NORMANS

In the year 911, a treaty, which was to have much significance in world history was concluded between King Charles of France—him they called the Simple—and one Hrolf, a Northman.

"Hrolf was a great Viking, and so large that no horse (meaning the little Northern ponies) could carry him, so that he walked wherever he went, and for this reason was called Göngu Hrolf (Walking Hrolf)."

Returning from a Viking expedition in the East (presumably an unprofitable one) he made the mistake of raiding in the territory of Harald Fairhair, King of Norway. Like most robber-kings, Harald was exceedingly touchy about any large scale pilfering in his own domains, and the Walker was promptly outlawed.

"Göngu Hrolf then went westward across the seas to the Sudreyjar (Hebrides) and thence to Valland (France), and made war there, and got a large jarl's realm, where he induced many Northmen to settle down. It was called Nordmandi." Thus the Saga of Harald Fairhair describes the founding of Normandy – though Hrolf, or Rollo, as he is sometimes called, could hardly have forseen the long-term effect of his land-grabbing expedition. For the treaty gave the outsized Northman and his followers a sizable section of the fair land of France and set in train a series of events which resulted in the destruction of the Anglo-Saxon kingdom across the channel and, some three centuries later, almost brought about the downfall of France itself.

The mixture of races and cultures can produce startling results, and it was so in this case. The characteristics, good and bad, of the Northmen, with their natural aptitude for adaptation, were seemingly accentuated by their contact with this other race and civilization. The new breed was naturally renowned for its hardihood, courage, and skill with weapons—taking readily to the mounted warfare of the Franks, and soon outdoing their teachers. They inherited all the acquisitiveness of their ancestors, and some of the avarice and cunning of the native population, result-

ing in a great greed for material possessions and power. The wildness of their Norse forebears was magnified in the turbulence of the Normans, who were forever in a state of anarchy and rebellion unless held down by a firm hand. This Viking urge for freedom was tempered by their acceptance of the feudal system in force in their adopted land and by the ever-present, if tenuous, hold of the Church.

The Norse love of adventure was coupled with the practicality of the Gaul, so that daring ventures in far lands were usually undertaken with a shrewd eye to profit and the gaining of territory. This last was almost an obsession. None so tenacious of his home and holdings as the sailor retired from the sea; and perhaps the subconscious desire of the wandering seafarers of the North for a safe haven was translated into the Norman greed for land.

They inherited, too, the Northman's love of eloquence, and his almost excessive fondness for law and legal forms. As with the Northmen, the Norman's passion for litigation had often little to do with justice—but perhaps was a form of self-justification. No matter what his crime, the Norman baron could usually furnish complicated legal excuses for his action.

These were the Normans—fierce, tricky, greedy, bold warriors and bad neighbors, as the descendants of the simple Charles were often reminded. Their land-hungry younger sons carved out principalities for themselves in Sicily and Southern Italy, Asia Minor and the Holy Land, but by far the most famous of their conquests was that of Saxon England. Of their other acquisitions no trace remains, but in England, while their fusion with the conquered became complete, in no sense did they become submerged. Medieval England was, in thought and culture, Norman England, and while the Anglo-Saxon blood and Anglo-Saxon characteristics gradually mingled with those of the invaders, the whole complexion of the English nation was changed and reoriented.

The duke who held Normandy in the middle of the eleventh century was William, son of Robert the Devil and the pretty daughter of a tanner. William the Bastard had had to fight for his dukedom. He was only a boy of seven or eight when his father died on a pilgrimage to Jerusalem, and though the barons had sworn to acknowledge him as his father's successor, his youth and the circumstances of his birth paved the way for many attempts on the ducal crown. The ensuing years were a period of anarchy. Instead of a ship, each Norman chief now had a stone castle or keep — but the old Viking instincts were still there, and robbery and violence kept the land in an uproar. In 1047, the young duke, three of whose

guardians had already been murdered, and whose own life had often been threatened, took steps to gain control of his duchy.

With the aid of his suzerain, the King of France, he defeated his rebellious barons and henceforth ruled his lands with an iron fist. In his numerous battles with his neighbors of Anjou and his rebellious barons, William proved himself a fine soldier while his handling of the affairs of his duchy showed him to be a competent statesman and administrator. In 1051 he visited his cousin, Edward the Confessor, King of England, and while in England he was probably given the promise of the English crown. He also had some slight claim to it through his wife, daughter of Baldwin of Flanders, who was a descendant of Alfred the Great.

His rival for the throne was Harold Godwinsson. Godwin, Earl of the West Saxons, was the most powerful man in England, next to the king, but in 1051 he had been banished, and his sons went into exile with him. In 1052 Saxon alarm at William's obvious designs on the English throne led to Godwin's return. On his death in the following year his son Harold became chief man of the kingdom. William still had faith in the Norman-loving Edward's promises, and in 1063 an accident gave him possession of Harold himself. The earl was shipwrecked on the Norman coast, and only released (shipwrecked persons were usually knocked on the head or held for ransom in those gentle days) after swearing on some sacred relics to uphold William's claim to the throne. However, Edward, who had become reconciled to the Godwins, recommended on his deathbed (January 6, 1066) that Harold be given the throne. The Saxons promptly elected him and crowned him king (they wanted no part of a Norman duke) and he began to prepare for the coming struggle.

Harold's brother Tostig, had been given the great earldom of Northumberland, but in 1065 his subjects had rebelled and driven him out and had chosen Morcar of Mercia in his place. Harold had acted as mediator but had been forced to agree to his brother's banishment. Tostig, vowing vengeance on Harold, took himself off to Harald Hardrada, King of Norway, and persuaded him to try for the English crown himself. That mighty man was nothing loath, and prepared for an invasion in the best Viking tradition. William, meanwhile, furious at being bilked, also began to gather men and ships—so that Harold lay between two enemies.

Our tale is with the Normans and Hastings, but the two brief campaigns are so closely linked that they must be treated as one. For if — and few battles in the

world have occasioned so many "ifs"—the invasion by Tostig and Hardrada had not taken place, or had been delayed, the battle at Hastings might have taken a different turn. We do not know what Harold's losses were at Stamford Bridge, but it was a closefought hand-to-hand fight and the casualties were heavy. Such losses must have been particularly severe in the ranks of the *huscarles*, the only force of "regular" troops in the kingdom—and were to have a decisive effect on the battle with William.

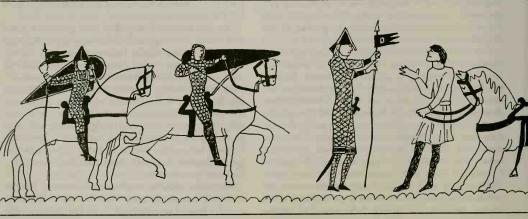
The Saxon army was composed of a national militia, called the fyrd, and the huscarles. The fyrd was raised on a short term basis, and could probably be maintained in the field for only a couple of months. The huscarles, which were originally the personal bodyguard or warband of chief or king, seem to have developed into a paid force of professionals. This standing army was no doubt well-armed and equipped by the standards of the time. Probably all the huscarles wore brynjas and helmets and many would have carried the kite-shaped shield, which had by this date largely replaced the old round shield. The fyrdmen-raised and paid on the basis of a man for every so many hundred acres of land-would probably also have been properly armed. There would be, however, some volunteers from the districts immediately affected by the emergency and these would, in many cases, be without armor, and armed with only the rudest weapons. Though brave enough - the Saxon was a tough fighting man - they would also be completely undisciplined - a fact which was

to have a decisive result on the outcome of the battle—and the fate of England.

The Normans, knights, and men-at-arms, on the other hand, were men trained to war, and under the firm command of such a man as William, were capable of some degree of concerted action. Their arms and armor probably differed little from those of the better equipped of the English. They were also, of course, accustomed to fighting on horseback, which many of the English were not. For while it is highly likely that Harold's huscarles, and probably many of the fyrd, were mounted, their horses were mainly a means of transportation, and they did most of their fighting on foot. However, that the English made some use of cavalry is shown by this excerpt from an account of the battle at Stamford Bridge.

". . . The English horsemen made an attack on the Northmen; the resistance was very hard, for the spears of the latter were so placed that the horsemen could not reach them with their weapons. Then they rode around the array, but as soon as they came near, the archers of the Northmen shot at them as fast as they were able. The English saw that they could effect nothing, and rode back. The Northmen thought they were going to flee, and followed in pursuit; but as soon as the English saw that they had broken their shieldburgh they rode at them from all sides, shooting arrows and spears at them." [The Fornmanna Sögur]

It is a curious coincidence that pursuit and counterattack should be repeated within a few days at Has-



tings – and that an arrow should cause the death of both kings.

The weapons and armor used by the Normans at the time of Hastings was representative of the best equipment in use in the Western world. The lance of the knights was about 10 feet long, with a stout shaft and a leaf-shaped head. These spears usually carried a pennon of from two to five points. As well as being used as lances, they appear also to have been thrown like javelins. As only one was carried it is to be assumed that this was only done in an emergency. The sword was long, straight, and double-edged. The quillons, or crossguards, were usually straight, and the pommel terminated in a round knob. It was worn at the left side, suspended from a belt, or sometimes thrust through a slit in the side of the hauberk. Besides the lance and sword, the Norman knight often carried a mace. This was probably hung at the saddle-bow, as it was at a later date.

The helmet was conical and usually fitted with a broad nasal, or nose piece. The standard body armor was the hauberk. This was essentially the brynja of the Northmen, a shirt-like garment of mail, or of leather covered with rings or overlapping plates. It appears to have been longer than the brynja of Viking days, often reaching to the knee or lower. "Emma was his (Hardrada's) brynja called; it was so long that it reached to the middle of his leg, and so strong that never had a weapon stuck in it." Because of this extra length, and because it was worn on horseback it was divided at the bottom, back and front, so that

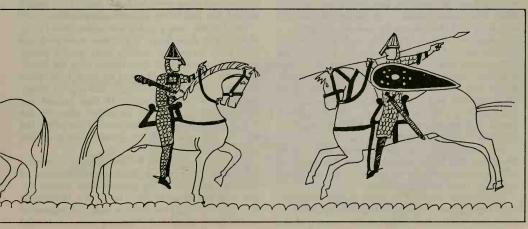
the wearer could wrap a portion around each thigh when mounted.

The top part usually formed a coif, or snug hood, which protected all but the face. Leg defenses do not appear to have been much used at this time. The lower limbs were usually wound with strips of cloth or soft leather. However, a few figures in the Bayeux Tapestry show what appear to be leg coverings of mail. The wooden shields were kite-shaped, this being a more efficient form for use on horseback than the round shield of earlier days.

Of the armor and arms of William's foot soldiers we know very little. A considerable part of his force consisted of bowmen, and the tapestry shows these as being unarmored and bareheaded; carrying a quiver at the right hip. These archers were to play an important part in the battle, but what the other foot soldiers accomplished is not clear. It is certain that the brunt of the fighting fell on the Norman knights and their allied chivalry of France and Brittany.

The bow was not popular among the Anglo-Saxons, although it may be safely assumed that there were some archers among Harold's troops. A favorite weapon was the two-handed, or Danish, axe and it is probable that a great many of the English carried them. Bearing out a previous statement that some of the local levies would have been poorly armed is the statement by William of Poitiers that the English met the assaults with, "Spears and javelins and weapons of all kinds together with axes and stones fastened to pieces of wood."

Norman cavalry-from the Bayeux tapestry



One of the great problems of a commander in medieval times was to keep an army composed mainly of militia, or of feudal knights and retainers, in the field for any length of time. Service was for a specified time; payment for such a force meant that more money must be raised by special taxes, always an unpopular expedient, while the matter of supply usually proved an unsurmountable obstacle. Thus it was that Harold, who had called the *fyrd* in a general mobilization and assembled a considerable fleet, in the belief that the invasion from Normandy would come in mid-summer instead of the end of September, had been forced to let his ships go and disband the *fyrd*. Which demobilization was in process when he received the news of the invasion in the North.

The Yorkshire fyrd, led by the northern earls, Edwin and Morcar, were defeated (September 20) outside York with great slaughter and Harold at once set out from London with his huscarles and those of the southern levies which had not yet dispersed. The speed of his march indicates that his troops were mounted. He was doubtless joined by levies en route, and such of the northern men who had rallied after their defeat on the twentieth. He reached York on Sunday, September 24.

"The same evening, after sunset, Harald, son of Godwin, came from the south with an overwhelming host; he was let into the town with the consent and goodwill of all the townsmen; then all the roads and the gates were occupied so that the Northmen should not get any news; the host was in the town during the night.

"On Monday, when King Harald Sigurdarson and his men had had their day meal, he sounded the horns to go ashore; he made his host ready, and selected those who should remain or go ashore. He let two men from each detachment go, and one remain. . . . The weather was exceedingly fine, and the sun so hot that the men left their armour behind, and went up with shields, helmets, spears, and swords; many carried bows and arrows, and they were in high spirits. When they came near the town they saw great clouds of dust, and a large host on horseback, with fine shields and shining brynjas . . . It was so well armed, and the weapons glittered so, that it was as if one looked at broken shining ice."

The "iccfield" was to prove the undoing of the Norsemen. The battle was a fierce one, but by nightfall the surviving Northmen were in flight, their King and Earl Tostig among the dead.

The English were not to enjoy their triumph for long. On October 1 hard-riding couriers brought the news that William had landed on the morning of the

twenty-eighth at Pevensey. Harold wasted no time. He was in London on the fifth or sixth, where he stayed until the eleventh, collecting such men from the neighboring districts as he could, and waiting for the arrival of the bulk of the troops which he had led north (it is safe to assume that not all of these would have been able to keep up the pace of forty miles a day set by their leader).

Leaving London on October 11, Harold's forces covered the sixty miles to Hastings in some forty-eight hours marching time—no mean feat—and on the morning of the fourteenth were drawn up in battle array along a rise in the ground a little to the north of Hastings. His troops were dismounted, and in a solid formation, possibly ten deep. This shield-wall probably stretched along the rise for six hundred yards—an unbroken mass of men and steel. In the center, where the huscarles stood, waved the Dragon standard of Wessex and the personal banner of the King, the Fighting Man. The flanks were secured by a wooded rise on the English left and a marshy stream on the right.

William's forces were in three divisions. The left, mainly of Bretons, the right of French and other mercenaries, and the center of Normans, under the duke. Each division was in three lines: archers and crossbowmen in front, heavy infantry in the second, and mounted knights and men-at-arms in the third.

The numbers engaged have been variously quoted. William of Poitiers, the duke's chaplain, puts the number of the invaders at 50,000. This figure is far too high, especially as the cavalry brought their own mounts with them. Most modern authorities put the total at between 6000 and 7000. Others suggest 5000. Of the total there were probably some 2000 mailed cavalry, the rest being archers and spearmen.

The English were possibly not above 5000 (a sizable force in those days). While there were doubtless some local levies, the majority were picked troops, many still flushed with their victory over the Northmen. The armies would seem to have been about equal in numbers. The Normans had a great advantage in their heavy cavalry with their trained war horses, although this was somewhat offset by the strong English position on the crest of the ridge. The archers and crossbowmen definitely weighted the scales in the duke's favor.

The battle began with the advance of the Norman divisions on the English position. The shooting of the Norman bowmen, discharging their missiles uphill, does not seem to have been very effective at this stage, nor could the footmen make any impression on the Saxon shield-wall. Wielding their two-handed

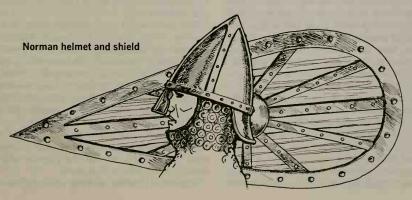
Danish axes, and shouting "Out! Out!" the English drove back each attack and with such loss that the Breton division retired in disorder. The panic spread to the central division and to add to the confusion, the duke was unhorsed. A shout went up that he had been slain, but mounting another charger and pushing back his helmet so that he could be easily recognized, he succeeded in rallying his shaken followers. It was high time, for the English had begun to press downhill after the flying Bretons, and had Harold ordered his standards forward it is entirely possible that the footmen of the other two divisions would also have fled, carrying the mounted men with them. As it was, a counterattack of the Norman knights drove the English back to their positions with some loss.

The attacks were now renewed all along the line, the knights riding forward in small bodies in attempts to break the shield-wall-the English beating back their attacks with axe and spear. Unable to make any impression on the Saxon position by these tactics, William decided on a feigned flight, to break the defenders ranks and to draw them off their ridge. The ruse was successful and, "The Normans suddenly wheeling their horses surrounded them and cut down their pursuers so that not one was left alive. Twice was this ruse employed with the utmost success."

The day's fighting and the results of the two feigned flights had seriously weakened the English line. However, night was drawing on and it was probably in preparation for a desperate all-out assault that the duke ordered his archers to shoot over the heads of his knights and to gall the English with a rain of dropping shots. It was about this time that a chance shaft struck Harold in the eye, causing a mortal wound. The much-thinned shield-wall was at last broken in several places and finally, as darkness fell, the surviving English were driven off the ridge. Even then they were not completely broken, and small bodies made a fighting withdrawal, inflicting some loss on a group of pursuers whose horses plunged into a ravine.

But William's victory was complete. The flower of the English Army lay dead around the standards, Harold and his brothers among them, and the road to London and the throne of England lay open. Better generalship, and the skillful combination of archers and heavy cavalry had beaten a brave army in a strong position. It is customary to lay much of the blame on the indiscipline of the English, and rightly; but it is doubtful if the troops of any army of that date-with the exception of the Byzantines-would have shown any more restraint under the circumstances. Certainly the annals of feudal warfare are full of such instances of disobedience to orders, the nobles often leading the way. Over the ages, the sight of a flying enemy has tempted many good troops to their destruction, and it is unfair to hold Harold's frydmen up as a bad example.

Both Norman valor and Saxon doggedness showed up to good advantage on that hard-fought field - a presage of victories in the days to come when the two nations would be welded into one. Of the two races the Normans exhibited more fire and dash - both requisites for complete victory. Wars are seldom won by merely holding strong positions. Ultimately the enemy must be attacked, and it is as the attackers that the Normans shone. Their mixture of cold northern fighting ability and élan; straightforward courage and cunning; boldness and capacity for organization and planning made them the warriors, par excellance, of the Western World.





CRESCENT AND CROSS

The twelfth and thirteenth centuries saw their full share of strife, but despite almost universal warfare, it is on the great tides of the counter-Mohammedan movement known as the Crusades that history seems automatically to focus. These mass invasions went on for years (1096–1271) and involved all sorts of people – kings and commoners, even children, of many nations. The arms and equipment used on both sides differed very little during these years, and as the First Crusade is probably representative of the crusading spirit at its best – or worst – it has been chosen to typify the whole.

Much has been written about the causes of the crusades. Boiled down to their essence, they were faith, greed, and love of adventure. There was among many of these armed pilgrims a very deep and sincere desire to free the Holy Places from Moslem rule. To understand this, it is necessary to attempt to recapture the mixture of intense faith, superstition, ignorance, cruelty, and bigotry which made up the

spiritual beliefs of our ancestors. This is no easy thing to do in an age such as ours, but without doing so these great eastward surges of peoples of such diverse nationalities and stations in life are incomprehensible. The capture of the Holy City, then, was the prime motive.

This sudden and overwhelming desire to take Jerusalem, which, after all, had been in Moslem hands for centuries, was sparked by the rising power of the Seljuk Turks. This warlike and nomadic people had overthrown the Caliphate of Baghdad, defeated the Eastern Empire at Manzikert, and overrun Asia Minor. In 1076 they captured Jerusalem from their fellow-Moslems (who had been exceedingly tolerant of Christian pilgrims and their churches) and being, like all new converts, twice as zealous and intolerant as their brother Mohammedans, they proceeded to treat the Holy Places, and the pilgrims who yearly flocked there, with a high hand.

Reports of atrocities and the defiling of sanctuaries

filtered through Europe – probably much exaggerated, but sufficient to arouse the more ardent churchmen. These, as zealous to free Jerusalem as the Turk was to hold it, were also anxious to channel the combative spirit of the nobility into a direction more pleasing to the Lord than the perpetual harrying of each other's lands, with attendant disaster for both the clergy and the common people. The rulers, likewise, were only too glad to divert the attentions and energies of their pugnacious and unruly vassals. These, in their turn, were offered the chance of fighting (which was about all they were good for), for which, instead of the usual maledictions of the priests, they were offered remission of sins and assurance of paradise.

Secondly, Europe was full of land-hungry nobles, second sons and others even farther removed from any hope of patrimony. These adventurers were always ready to avail themselves of a chance to carve themselves an estate, or kingdom, out of someone else's land—and the chance of doing this at the expense of the paynim, and with the blessing of Holy Church, was too good to be missed.

With much the same motivation, though not on such a grand scale, an invasion of the fabulously wealthy East drew like a magnet a whole army of riffraff—discharged soldiers, escaped convicts, runaway serfs, ne'er-do-wells, thieves, and outlaws—lured by the hope of unlimited chance to plunder and rape—all under the protection of the banners of the church.

There were other causes—the jealousy and desire for expansion of such trading cities as Genoa and Pisa—and the intrigues of the Byzantines, who desired aid from the West to help in reconquering some of their lost Empire. But these affected the soldiers of the Cross but little. For most it was a great adventure, a chance to escape the dull everyday life of hut or manor, and above all, to strike a blow for Christendom and so gain some measure of salvation—and perhaps some loot.

The warriors who made up this motley host were many and varied, but the backbone of the force, was, of course, the armored horsemen. These were the natural-born fighters—the owners of the costly suits of protective mail—of the trained war horses, of the weapons. These were the gentry, the mounted men, the chivalry—who owned the land, and the serfs on it—or held it in fief from some liege lord and to whom they owed service with sword and lance. Their lives were spent in hunting (one of the few useful things they were capable of, besides fighting) by which sport they not only worked off some of

their savage energy, but filled the manor larders as well; and in war or preparation for war. Of learning the vast majority had none, and even their knowledge of the world beyond their manor borders was limited to the gossip at the yearly spear-running, or was relayed by passing minstrels.

From boyhood they were taught horsemanship, and how to handle sword and spear. Their one dream was the time when they should attain knighthood — be girt with a sword of their own, be given armor, sword, lance, and charger, and have bound to their feet the gilt spurs; spurs which set them forever apart as members of the great order of chivalry. They were then the equal in essence of duke or king — and far superior to the mass of underlings, churls, lackeys, retainers, and merchants which went to make up the drab, grimy world beneath them — a world which existed but to maintain them in their rude but exalted state.

As fighting men they were superb. They were physically strong, splendidly trained to the use of weapons, and armored and armed with the best equipment of the age.

These arms and armor are essentially the same as that used by the Normans at Hastings thirty years before. Not until later did the complete covering of chain mail, with the pothelm covering head and face, come into use. The only addition to the hauberk was the trouser-like leg coverings, called chausses, which began to appear about the beginning of the twelfth century. So equipped, the iron horsemen were more than a match for any number of the common folk, ill-armed, unarmored, and on foot. It was thus that he maintained his over-lordship, for no others but his own kind could stand against him.

As soldiers, implying something of discipline, orderliness, and obedience, the chivalry were no better than raw recruits. Each local lord could expect some small semblance of obedience from the knights in his train, but on the whole, each man fought his own battle. Of tactics there could therefore be little, of strategy even less, and of march-discipline, organization of supply, of transportation, or of medical care, there was none at all. Sad experience finally taught them, just as any recruits are taught - and those men who reached Jerusalem were veterans indeed. But of the throngs of nobles who set out for the Holy Land few knew anything of the art of campaigning in a bleak and desolate land. Few of the knights, and, it is safe to say, none of the common people knew even vaguely how far Jerusalem lay, or what lands - or seas - and what peoples lay in between. Granted they started from their homelands in great numbers, but considering their innocence of geography, discipline,



and hygiene, it is a miracle that any should have survived sickness, hunger, drought, ambush, siege, and open battle, to besiege and storm the Holy City.

All they had was courage, great stamina, both of

body and spirit, great faith and great fixity of purpose. With these things men may do much.

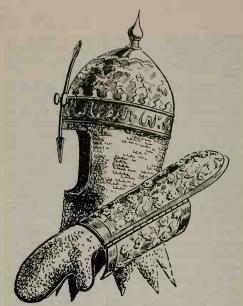
, Many never lived to reach Constantinople. For to expect such a motley, ill-disciplined host, without

proper supply trains or depots - to march hundreds of miles through friendly territory without plundering would have been to expect a miracle. No such miracle was forthcoming, and the wide-spread looting and the atrocities they committed against the Christians whose lands they traversed roused the inhabitants to fury, and heavy fighting broke out in many places. By far the worst offenders were the men of the socalled People's Crusade, led by Peter the Hermit and a knight called Walter the Penniless. This strange assortment of peasants, gentry, cut-throats, and masterless men - and women - rolled slowly down from northern France and the Rhineland during the spring and summer of the year 1096; through Swabia and Bavaria, picking up recruits as it went until it resembled the mass migration of some Germanic tribe, complete with wagons, cattle, women, and children. In Hungary the robbery and violence got out of hand. Pitched battles with the outraged populace took place, followed by skirmishes with the Emperor's frontier guards. Agreements with the Byzantine governor to restore plunder and refrain from further looting meant nothing to the rabble. Near Nish the Emperor's horse-archers inflicted a severe defeat. The Hermit's host lost most of its baggage wagons (and presumably most of its loot) and the survivors were now carefully shepherded down the route to Constantinople by troops of Byzantine cavalry.

The Emperor, horrified at the arrival of this swarm of predators in the suburbs of his capitol (among other things they stole the lead sheets from the church roofs to sell in the market), made haste to ferry them across the strait to the Asiatic shore. Here they camped for a while, happily plundering the population and recovering from their journey. An organized raid by the Lombards and Bavarians brought on the first clash with the Turks, who cut them off from their water supply and finally captured the lot:

"The master of the Bavarians agreed with the Turks to surrender all the others. They who would not deny their God underwent death. The Turks placed others at a mark and filled them with arrows, or divided the captives among themselves like animals, buying them and giving them away."

The despairing Hermit had gone off to beg aid from the Emperor, and in his absence the unruly mob, despite the warnings of Walter and his captains, decided to march against the enemy. The results may be imagined. The wary Turks retired until they had ample room to maneuver, then closed in. Walter the Penniless went down with seven Turkish shafts through his mail and the leaderless mob broke and



Eastern helmet and armguard

fled. The Turks pursued the fugitives back to their camp and butchered all but the best-looking women. A few hundred men found refuge in an old fort, in which they held out until rescued by Byzantine ships. So had ended the People's Crusade — a sorry reminder of what a combination of spiritual fervor, ignorance, greed, and indiscipline can do to the most well-meaning undertakings.

The adversaries of the iron men were the Seljuk Turks, hardy and fanatically brave. They were primarily horse-archers and used the time-honored light archer tactics of advance and retreat—giving ground before their opponent's charge, only to close in on his flanks. Physically they were no match for the men of the north, nor could their light curved sabres prevail against the mighty blows of the heavy straight swords, three feet in the blade, of the Christian knights. Some wore light armor, and pointed helmets, often wound around with a turban. Most carried small round shields and some the light lance.

However, the followers of Mohammed suffered from a disadvantage greater by far than the disparity in weight of men and weapons. For the Moslem world was torn by civil strife, the Seljuk Empire already disintegrating into a number of petty states. Had this not been the case the crusaders would never have got far beyond Constantinople. As it was, after the first battle they advanced almost unmolested through

Christian Armenia and were allowed to besiege Antioch in leisurely fashion, which they would not have done had the great Seljuk leader Alp Arslan still been alive.

Excluding the Byzantines, with their centuries-old military organization, the conflicts of East and West have usually fallen into a pattern—that of the heavy thrust, met by the resilience of a fluid defense—the blow of a mace parried by a feather-bolster. The charge of heavily armed and armored men is time and again delivered against thin air—against nimble men on nimble horses who threaten, charge, break up, retire, rally, and charge again in a bewildering pandemonium of dust and confusion; and with always the whistle of the horse-archers' shafts as an accompaniment.

It was so at Dorylaeum. The bands of the crusading knights, not so ill-disciplined, and better led than the followers of the unhappy Hermit, had reached Constantinople with a minimum of rapine and murder. (Profiting by his experience with the hungry rabble of the people's crusade, the Emperor provided each contingent with supplies—and a large and watchful escort.) After finally crossing into Asia and helping to take Nicea, the army had begun its march across Asia Minor toward Jerusalem. The great Turkish stronghold of Antioch was to be the first objective.

The route led through Dorylaeum, and here the crusaders fought their first pitched battle. The Christian host had been split into two columns, to take advantage of parallel roads. One column, under the redoubtable Bohemund, was resuming the march after breaking camp when the advance guard reported bodies of the enemy in sight. Another camp was hastily set up, with the women, children, and baggage guarded by archers and footmen, while the mounted men formed to the front. Hardly had this been done when masses of Turkish horse trotted across the plain to the attack, to the accompaniment of rolling kettle drums and the clashing of cymbals. The leading lines of crusaders charged, and the Turks scattered before them, pouring in flights of arrows as they galloped away and round the flanks. It was hard for the northern knights to come to grips. The light Turkish cavalry swarmed on all sides, melting away before the thundering charges, and whirling in sudden attacks from the flanks. The plain was covered with masses of horsemen, charging and wheeling, rallying and pursuing. The Turkish arrows were taking terrible toll of the precious war horses, and many of the knights were dismounted.

Fresh troops of Turkish cavalry appeared on the flanks, and a large body attacked the camp, scattering

the footmen and riding in among the tents and wagons. Many monks and the wounded they were tending were slain, and women raped and murdered; then a wave of retreating crusaders drove the Turks from the captured portion of the camp. The constant charging and countercharging wore out the knight's horses. Attack as they would they could make no impression on the loosely organized throngs of Turkish cavalry. The Turks pressed their attack, swarming in under clouds of arrows.

Here in the swirling dust fanatics of two faiths met in a death struggle—both sides probably amazed at the fury and courage of the other. There was no sign of the other column and the weary crusaders were suffering severely from the arrow-hail, with all too little chance of retaliation. Then finally the other half of the army arrived, sweeping down on the Turkish flank and rear. The light horsemen could not stand before the fresh onslaught. Caught between the two bodies of the crusader's army they could not maneuver. Neither could they stand, for the heavy Western cavalry crashed through their ranks, overthrowing horses and hewing off limbs.

The Turks swept off in retreat, abandoning their camp. The victory was to the Cross, but the crusaders had suffered severe losses, especially in horses. They were to pay dearly for that, for the way was long and hard, leading through wild country that afforded neither food nor water. An unknown Norman knight marched with Bohemund and left a remarkable narrative of the hardships and battle of the crusaders. He is known to historians as The Anonymous. He wrote of one part of the journey:

"We barely came through. We had to eat grain that we pulled off and rubbed between our hands, a miserable fare. The larger number of our horses died, so most of the chevaliers walked afoot. For lack of horses we used cattle in place of chargers, and in this extreme need, goats, sheep, and even dogs were pressed into service to carry our baggage."

The privation and battle casualties had taken great toll. But though the ranks might be thinned, under the fierce hammering of Turks, sun, hunger, thirst, and disease, the survivors were being welded into a whole, despite the babel of foreign tongues.

"Who had ever heard so many languages in one army before? Here were Franks, Flemings, Frisians, Gauls, Allobroges, Lotharingians, Germans, Bavarians, Normans, Angles, Scots, Aquitanians, Italians, Dacians, Apulians, Iberians, Bretons, Greeks and Armenians. . . . But we were all brothers in God's love, and seemed like kinsmen."

The crossing of the better part of Asia Minor in

the August heat was a severe trial, but the mighty Taurus ranges lay ahead.

"Horses fell into the ravines," wrote The Anonymous, "and one pack animal would drag over others. In all quarters, the knights showed their misery, and they struck their bodies with their hands mournfully, asking themselves what they were to do, and how they were to manage their arms. Some of them sold their shields and goodly hauberks with their helms for three to five dinars, or for anything they could get. They who could not sell their arms cast them away for nothing at all, and marched on."

More men fell to the mountains than had been slain by the Turks but the nightmare journey was

done at last.

"And so finally our knights reached the valley where Antioch, the royal city, is situated, which is the head of all Syria, which once the Lord Jesus

Christ gave over to the blessed Peter."

Antioch was a strong city, girt by walls upon which four horsemen could ride abreast, and defended by hundreds of towers. Fortunately for the crusaders, they were able to capture a supply train bound for the city and, for a while at least, food was plentiful in the crusader's camp. It was suggested at a council of war that the place be stormed, but the defenses were so strong that such an attempt must have failed; and the walls were judged too stout to be attacked by siege weapons—even providing enough could have been built. The Christians settled down to a siege.

The governor of the city was a shrewd soldier, and harassed the besiegers by constant sorties. Food began to grow scarce in the Christian camp and foraging expeditions gleaned little from the countryside. Armenian and Syrian traders charged exorbitant prices for food and men who could not pay the prices began to die of hunger.

Upon the appearance of a relief force from Aleppo a force was mounted to intercept it, while those on foot stayed to repel the inevitable sortie from the city. Only seven hundred horses fit for combat were available and so it was that seven hundred knights, with Bohemund at their head, sat waiting the advance of the Turkish army. It is said that they sat singing under the rain of arrows — a long single line of mailed riders, their lance pennants drooping from the upraised lances. As they did not move, the Turks advanced; then the line of lance points came down and the knights charged. Hurled back at first, they rallied —Bohemund led in his tiny reserve, and they smashed the Turks back on their second line, this was thrown into confusion and the whole mass retreated,

firing their camp as they passed through it. It was a splendid victory and proved once again that the Turkish cavalry could not stand up to the Western horsemen in knee-to-knee combat on a narrow front. The sortie from the city was also repulsed, and a long row of spears decorated with Turkish heads did nothing to help the garrison's morale. They were further discouraged by hunger, and at last a traitorous officer of the garrison offered to let the crusaders in. So fell the great city—all but the citadel.

The place was sacked with great ferocity, but while the Christians were busy murdering and raping and defiling the mosques a large army of relief appeared before the walls. The besiegers were in turn besieged and were hungrier than ever. The intestines of a goat sold for five shillings - a goodly sum in those days - and the head of a horse, without the tongue, for three. The spirits of the Christians were at a low ebb-starving, with a strong citadel behind them and a great army in front. Then occurred one of those events, trivial in themselves, which change half-beaten men into raging lions - and change history at the same time. A youth claimed to have had a vision in which he was told that under a certain church lay buried the lance which had pierced the side of Christ. After much digging a lance head was found - by the youth himself, as might be supposed. But the Christians had been praying for a sign, however suspicious the circumstances. Morale in their camp soared and they clamored to be led out to battle. Finally the leaders agreed.

It was a strange battle line which advanced to meet the heathen. Little bands of mounted knights - many more fought on foot because they had no mounts - priests, women, footmen, all ragged and hungry, but all following the magic symbol, a rusted lance head bound to a cross. Behind them was starvation and death; ahead, beyond the clouds of Turkish horse, they glimpsed salvation. The Turks had a splendid army, but their general, Kerbogha, had made the mistake of underestimating his opponents. Small blame to him, for the tattered ranks cannot liave appeared very impressive. And no one who had not tried to stand before the charges of the Christian men-at-arms under such warriors as Tancred and Bohemund and Godfrey of Lorraine could appreciate the furious impact of their attack. An even more serious error was in attacking on too narrow a front, where his enemy's flanks were secure from the traditional Turkish enveloping tactics.

The Christian foot, the spearmen, archers and crossbowmen – were by then hardened veterans, victors in many fights, and they were further strength-

ened by the dismounted knights in their ranks. Evidently the combination of missile weapons and shockpower had much to do with the Turkish defeat. Still, such a battle goes against all the rules - and perhaps the Moslems were right in blaming Kerbogha for the disaster. The Arab troops, too, no lovers of the Turks, fled early in the battle. By rights the crusaders should have been riddled through and through - shot down by the hundreds, and then the groups of survivors ridden down and put to the sword. Somehow it did not turn out that way. The Turks, amazed at the fanatical advance of men who would not die-and did not care if they did-gave way, and the battle ended with the exultant Christians pursuing the Turks beyond their camp. It was a smashing victory, one which must have surprised the Christian leaders as much as it did the Turks, and it cleared the way to Jerusalem. It also, although the crusaders did not know it, broke the Turkish power in Syria. After this, the heathen enemy would be Arab, led by the Caliphate of Egypt. Forces of the Caliphate had taken over Jerusalem soon after the Battle of the Lance and when the crusaders arrived before the city it was held by some 1000 men-far too few for a place that size.

An attempt to storm the walls was beaten off, and the Christians settled down to a siege, sending working parties to the nearest forests thirty miles away. Finally the siege weapons were ready—two towers, each with three stories, the topmost structure being for the archers who would sweep the wall, while from the floor below the storming parties would pour across gangways to the top of the wall. Sows, the movable sheds to protect the rams and the miners, were also made, and many engines to cast stones. There were also plenty of mantlets to protect the bowmen who would cover the walls, and many scaling ladders.

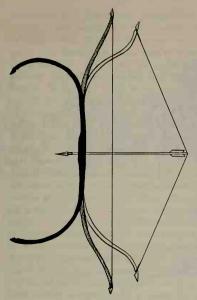
According to the accounts it was from one of the towers that the crusaders gained the walls. Once they had won a foothold it was all over. The garrison, spread thin along the defenses, was too weak to organize a counterattack. A frightful slaughter of the inhabitants took place—the street literally ran with blood as men, women, and children were cut to pieces. It was perhaps a fitting end to a crusade which from the beginning had been so strange a mixture of prayers and curses, bravery and cowardice, self-sacrifice and rapine, Christian faith and bloody massacre.

It is difficult to evaluate the respective merits of crusader and Moslem. Religious enthusiasm there was on both sides, so that this factor may be said to have canceled out. Leadership, perhaps generalship is a better word, counted for a great deal, far more than it does now. For in those days the fortunes of soldier and commander were closely bound together. Today even a battalion commander may be far removed from actual contact with his men; and the units engaged are part of a great machine in which troops are moved, supported, or replaced with little personal contact with any but their immediate superiors. But where the battle-instead of being one incident in a whole interwoven pattern of incidents - was a solitary event, a contest between two isolated groups of men, on the outcome of which the lives, not only of the combatants, but very often of their families and their whole fabric of existence depended, then the battle became a very personal thing indeed. And ninety-nine times out of a hundred it was the general's skill-his eye for ground, his knowledge of the enemy, his tactical ability and his personal courage which meant the difference between defeat and victory.

In the days of which we speak drawn battles were rare. Most were decided one way or the other in a few hours. And, while victory was usually rewarded with honors, plunder, and a period of ease, defeat meant, not a retirement to a quieter sector to refit or a spell in a base hospital, but death on the field or in the inevitable pursuit (usually far more bloody and destructive than the actual battle) or at least a life of slavery. So it is easily understood how vital to his men was a successful commander, how jealously they guarded his life and how with what dismay they regarded his fall.

At a time when personal prowess was still a factor, the strength of arm and reputation for exceptional bravery counted for a great deal. Young Tancred, the Norman, was such a one—no great strategist, perhaps, but his voice and sword alone was worth a company in any part of the field, and at the head of a few hundred devoted followers, he was equal to an army. Bohemund was another who combined great strength and a fierce courage with the skill of an experienced soldier—and the sight of his crimson banner more than once revived the sinking morale of the Christian host.

In later days the mighty Saladin would bring all the attributes of a great leader to the side of the Crescent, and his overwhelming victory under the Horns of Hattin, the most decisive battle of the Crusades, would destroy forever the Christian Kingdom of Jerusalem. And to avenge the loss of the Holy City there would come still another crusade—and with it the towering figure of the warrior-king—Richard of England, the Lion-Hearted. Here was another who



Eastern composite bow—shown unstrung, strung, and drawn

men followed willingly into hardship and danger. At Arsuf his personal courage and tactical skill won a victory from the redoubtable Saladin, and the sight of his commanding figure wherever the fight was hottest, striking down the Saracens with mighty blows, directing, encouraging, spurring to check an onrush here and pushing a charge there made his name a rallying cry in the whole Christian host and struck terror in the ranks of the heathen. Melech-Ric the Arabs called him, and for centuries Arab mothers would use the name to frighten their unruly children.

The moral effect of the presence of such warriors in the field, both on their own troops and on the enemy were incalculable. Nothing remotely resembling it exists in warfare today, nor will it ever again.

In weapons and personal strength the advantage lay with the crusaders. Their armor was usually more complete, their weapons heavier, and their horses (those that survived the long journey from their homelands) more powerful. The crossbow, with which many of the foot soldiers were armed, while slower to ready than the bows of the Saracens and

Turks, was a great deal more powerful. A Moslem chronicler, one of Saladin's secretaries, records that the gambesons (heavily quilted garments, often covered with leather) of Richard's crossbowmen were stuck "so full of arrows that they looked like hedgehogs" while their wearers were unharmed—a statement which shows that at long range the light arrows from the Saracen bows could inflict little damage. At Hattin, the greater number of knights were taken because their horses had been killed, not because they themselves had suffered much loss under the incessant showers of arrows. Others, whose mounts were unharmed, broke through the encircling horse and escaped.

Of physical courage both sides had plenty. Yet, while capable of acts of fanatical bravery, there is a fatalistic streak in most Orientals, which stands out in contrast to the cold, persevering bravery of some Europeans. Perhaps bowing to the will of Allah predisposes men to bow to the will of others. Certainly in the majority of Easterners there is little of the overbearing self-confidence which characterized many of the Western peoples and which time and again enabled small forces of crusaders to attack and put to flight many times their number of the Faithful.

Tactically, there was little to choose between Cross and Crescent. Neither were disciplined by, say, Byzantine standards, and without discipline any but the simplest tactics are impossible. But of the two, the Christians adapted faster to a new style of warfare and, by combining the shock of heavy cavalry with the missiles of crossbowmen (and later, mounted archers) and the resistance of steady footmen armed with spears and axes, they invariably beat far larger forces. Against horse and foot combined, the light cavalry tactics of the Saracens seldom prevailed.

But the Christians were—in fact, had been from the beginning—in a strategically impossible position. Their tenure in the Holy Land called not only for strong centralized leadership in Jerusalem, but the establishment of close and cordial relations with their Palestinian subjects and, most important of all, a constant flow of men, money, and supplies from Europe. In that age, none of these requirements could be met. So the men of Outremer—crusaders no longer, but holders of Oriental fiefs and masters of Eastern castles, villages, and serfs—drifted gradually down to ultimate defeat and expulsion, unwept by their erstwhile subjects and all but forgotten by the lands that sent them forth.



THE MONGOLS

TINCE the dawn of history nation after nation of hardy nomads have been spawned on the high plateaus of Central Asia, to breed, to fight, to multiply, until suddenly they spill over the edges of the high tablelands, and pour with destructive force on the softer folk of the lower, and more civilized lands. Scythians, Parthians, Huns, Turks-all had flooded into the lowlands, leaving little but wreckage in their wake-but the most devastating of these great waves of barbarism was that of the Mongols. Combine the usual nomadic attributes - toughness and ability to survive in the most primitive conditions - great mobility, and, of course, superb horsemanship and mastery of the bow-with rigid discipline and splendid organization. Put at the head of such men a great leader and a most skillful strategist and tactician, ably seconded by capable commanders; then, unless the forces of civilization are equally or better organized, disciplined, and led, the world is faced with disaster.

When Genghis Khan led his Mongol hordes out of

the steppes the forces which set out to beat him back were neither organized, disciplined, nor well-led — and disaster struck. Countless millions died (an estimated 18,000,000 in China alone) and vast and fertile territories were turned into deserts. Some of them are deserts to this day, their ancient irrigation systems smashed, the descendants of their surviving populations long since departed for greener pastures. For like most nomads, the Mongols hated towns and villages and farms. Their ideal was the rolling steppe, where nothing hindered the free movement of the great horse herds. And so wherever they went they destroyed—turning the civilization they despised into a man-made replica of their native wilderness.

The steppe-dwellers of the Northern Gobi were divided into many tribes; Merkits, Kiraits, Taidjuts, Tatars, and others. Among them, and by no means the strongest, was the tribe of the Mongols, whose tribal grazing grounds lay some five hundred miles east of Lake Baikal. In this grim and inhospitable world they lived; hunting, grazing their herds, fighting among

themselves over the skimpy grazing lands and water courses. Their homes were the hemispherical felt tents or yurts, which, when on the move, were mounted on great carts drawn by a dozen oxen or more. Twenty or thirty of these carts were tied together, and, a girl driving the lead cart, would plod slowly across the steppe. Along with these traveling villages of yurts moved the vast herds of horses, oxen, and great droves of sheep.

The herds were the nomad's sole means of existence. They provided food, drink, and clothing, sinew for thread and bowstrings, horn to reinforce the bow,

and bone for implements.

Their diet was meat: cooked, half-cooked, or raw. On occasion grain or rice might be bartered — or stolen — from some caravan out of China. On a long hunt or on a tribal raid where two or three nights on end might be spent in the saddle — with no time to do more than water the horses and change mounts — the men were content to gnaw on raw flesh, warmed by being put between saddle and horse. In a pinch, blood drawn from a horse's vein served as food and drink.

This primitive existence, with death ever at hand from enemy weapon, sudden storm, or starvation—bred a race inured to all hardship—able to travel for days on end without rest—practiced in use of their weapons and skilled in night raids, in the setting of ambuscades, in feigned flights, in treachery, and all the strategems of nomad warfare. They were completely callous of all life outside their own community. Yet there was little sadism in their makeup. When they killed, they did so with a cold, relentless, cruelty—without pity or compunction.

But for one man these people would have continued to exist—content to battle cold, hunger, drought, and their enemies in the isolation of their lonely steppes. But every so often in history fate produces an individual who by some combination of ability, luck, virtue, timing, personal magnetism, and all the other attributes that make up a great leader, is destined to reshape the world. Such a one was Temujin, son of the chief of the Yakka Mongols, and one

day to be known as Genghis Khan.

Genghis Khan

The death of his father (perhaps 1175) saw the young Temujin installed as tribal leader – but many of the people drifted away, to follow stronger leaders,

who could protect them against the incessant raiding and petty warfare of their neighbors. The ups and downs of tribal warfare soon left the boy chief a fugitive and it was in the years of savage fighting—now at the head of a few faithful warriors—now almost alone and hunted from valley to valley, that the weapon was forged which was to lay half the world at the feet of a few grimy herdsmen.

Nothing succeeds like success, and some hard-won victories in little battles brought an ever-growing number of families back to his standard. When strong enough he attacked the adjoining tribes, hunting down their leaders as he himself had been hunted, and absorbing their surviving followers into his own forces. His chosen companions, those who had followed him and fought beside him in the lean and bitter years, were now the captains of his growing army of fighting men. As his fame spread, many of the neighboring tribes submitted. Those who joined he welcomed, those who resisted he scattered to the four winds. At last, at a Kurultai, or great council, of the Khans, he was named Genghis Kha Khan, the greatest of rulers, Emperor of all men.

His was the patience and determination of a hunter. To the natural attributes of the nomad was added an inflexibility of purpose and a self-discipline remarkable in one of his kind. Above all, he was an organizer. The loosely knit gathering of tribes he turned into an army, the pick of all the males, from boys to old men. The tribal bands of warriors he formed into regiments—Banners—and these were numbered in tens, and multiples of ten. Each Banner consisted of a thousand men, of ten squadrons of one hundred. Each squadron contained ten troops, of ten men each. Ten Banners made up a division, or touman, and a number of toumans, usually three—made up an army. The best troops made up a separate touman—the Khan's guard.

All were armed with a long slightly curved saber with a sharp point, similar to the cavalry weapon of more modern times, and suitable for cutting or thrusting; and a powerful bow. Some say two bows were carried—one a short hunting bow and the other, a longer and powerful weapon. Different types of arrows were carried—light ones for long distance, and thicker shafts with heavier steel heads for piercing armor. The bow or bows were carried in cases hung on the left hip, the large quiver on the right. The saber was carried in a leather scabbard on the rider's back—the hilt behind the left shoulder.

Some carried a lance, with a tuft of horsehair below the head—or iron hooks to pull men out of their saddles—but the main weapon was the bow. For defense they were helmets of iron or of hide, heavily lacquered, strengthened with iron. A leather neck guard, studded with iron, hung from the helmet to the shoulders. Some of the lancers carried small round shields—also of hide strengthened with iron. Breastplates and shoulder pieces of *cuir-bouilli* were used. Sometimes the cuirass was of leather on which iron plates were fastened.

Some of the horses were barded (protected on breast and flanks) and hide was almost certainly used for this purpose. It was plentiful on the steppes (which iron was not) and was easily worked.

Besides his arms and armor, each trooper carried a felt cape and sheepskin-lined jacket—no doubt similar in all respects to those worn by the Mongol herdsmen of today—lariat and picket rope, sacks of barley, a nose bag, a cook pot, axe, salt, and needles, thread, etc. for repairing his gear and clothing.

Each horseman had at least one remount, and on occasion possibly half a dozen. The steppe pony, while not handsome, was wiry and hardy—used to pawing through snow for grazing—and like his master, able to subsist on the barest minimum and in the most bitter weather. It is impossible to credit the Mongol with any feeling of compassion toward any living creature, but as a horse-using, if not horse-loving nation, he undoubtedly took as good care of his mounts as circumstances permitted. Without such care, no bodies of cavalry could have covered the vast distances with the speed of the hosts of the Kha Khan.

When formed for battle the troopers were in five ranks with a considerable distance between formations. Lancers and archers were skillfully combined so as to give a maximum amount of missile power and shock. The lancers, who were in the front two ranks, wore fairly complete armor, and their horses were barded. The three rear ranks were archers. These last moved through the intervals in the front ranks to deliver their fire and took their places in the rear again before a charge.

Discipline was severe. Each man was bound to support his comrades, rescue them if taken, aid them if wounded, and never to turn his back on the enemy unless a retreat was ordered. The small unit of ten thus became a closely knit group—made up of men who had lived and fought together for years, and able to rely on one another in any emergency. A contemporary states that "If one or two or three out of the ten fly on the day of battle, all the rest are tried and executed . . and if two or three out of the band make a gallant assault, and the rest do not follow them, the laggards are likewise put to death."

Tactically the Mongols—as with all of the nations on horseback—relied on harassing missile attacks to break up and throw into confusion the opposing ranks, while executing simultaneous encircling movements to take the embattled enemy in his flanks and rear. The successful carrying out of such movements called for discipline, timing, a system of signaling, and the close co-operation of skillful subordinates. These "standard-sweeps" around an opponent's flanks were a notable feature of Mongol tactics, and were likely to succeed against any but an exceedingly well-disciplined and steady foe. None of their opponents seem to have been able to muster a combination of mobility, missiles, and shock sufficient to defeat them.

The Mongol information services were excellent, and they made good use of the material gathered by their spies and agents. When the Mongol general Subotai set out to conquer the West, for instance, he was well-informed of the existing political situation in Europe, and fully aware that the German Frederick, ruler of the Holy Roman Empire, and thus temporal head of the Christian church, was engaged in a struggle for power with its spiritual head, the Pope. This division precluded any joint action against the invaders and was a contributing factor to the disasters which befell the rulers of Eastern Europe.

Treachery was also a weapon used to good account, and many strong places fell because of a traitor within the walls. But perhaps the most destructive weapon in the Mongol armory was terror. This terror was fostered by deliberate and cold-blooded atrocities—by the merciless slaughter of entire populations and the complete destruction of cities, towns, and villages. Sometimes cities that submitted to the invaders were spared, but those that resisted were made an example of.

The story grows monotonous with the reading—though without lessening the horror. The pattern was always the same, the citadel once taken and the garrison put to the sword, those of the population who had survived siege and sack were assembled and divided into groups. The artisans and all who might be useful were kept as captives, as were the most attractive of the women and girls. All others were massacred, and such was the terror inspired by the invaders that the miserable victims usually bowed their heads meekly to the swords of the killers.

A Moslem chronicler wrote: "So great was the fear Allah put into all hearts, things happened which are hard to believe. Someone told me a Tatar rode alone into a village, with many people, and set himself to kill them one after the other, without a person daring to defend himself." Resignation is not an Occidental

trait and it is hard for a Westerner to understand the state of mind of people who would thus tamely submit to slaughter.

The captives were either sent back on the long hard road to the Mongol homeland—thousands dying en route—or they were used, often as living shields, in the assault on the next city. When the Mongols retired to their steppes, they habitually killed all those whom they had previously spared to serve them.

It was Mongol policy — laid down by Genghis Khan himself — that no people be allowed to survive to form any sort of resistance movement. Cities and towns which might have served as rallying points were razed, and their irrigation systems, gardens, and cultivated regions methodically destroyed. Often the cultivators were spared until the crops were harvested, when they and their families were also killed.

So thorough were the Mongols in their campaign of extermination that they would reappear suddenly in a devastated area to round up any survivors who might have escaped, and, thinking their enemies had gone for good, had returned to the ruins of their homes.

This same terror was used against the rulers of a country or a tribe, as well as their people—for the members of a ruling house who opposed the Mongol tide were hunted down and exterminated. Thus did they hunt Mohammed, Shah of the great Khwarismian Empire. One of the rulers of Islam, he finally found safety on an island in the Caspian, where he soon died, a broken and penniless man. It is said of the chase that the pursuit was so hot that some of the furious Mongols rode into the water after the retreating skiff, following until horses and men sank beneath the waves.

Other rulers died on the field or were slain in the rout of their followers. Béla, King of Hungary, who had escaped the massacre at the river Sayo which destroyed his army and his kingdom, was hounded from refuge after refuge, his pursuers tracking him down even to the coast of Dalmatia. When he fled to an island, the Mongols seized boats and followed. The king escaped and fled back to the mainland, where the hunt was resumed. The fugitive monarch was followed from town to town, and finally took to the water again. Without doubt the implacable executioners would have combed the Adriatic for him, had they not been recalled to join the general retirement of the Mongol forces to the homeland.

The shiftless nomads, already tried warriors, expert bowmen, and natural horsemen, had now been given the one thing they had lacked – discipline and

organization. Neither came easily to simple plainsmen, but they bent to the iron will of their leader and, as a result, their power was multiplied. Against their combined might, no single tribe could stand, and as their strength grew, so did their confidence and admiration for the indomitable man who led them. No longer were they despised herders, whom envoys of the Chin emperors, who reigned beyond the Great Wall, used to play off one against the other. Now the tribes: Oyrats, Urianguts, Merkits, Tatars all were proud to call themselves Mongols. And while the united army ranged farther abroad, peace reigned on the home steppes, and women and children tended the herds and the villages of yurts, secure in the knowledge that, when horsemen appeared on the skyline, they would be friends, not enemies. For the old warring tribes were now welded into units in the great Mongol armies - the old jealousies and blood feuds forgotten. And to make sure they would not be revived their Khan decreed that inter-tribal quarrels cease, and that for one Mongol to strike another was a crime.

There had long been enmity between the nomads outside the wall and the civilized Chinese who sheltered behind it. Now the forces without were united. The determination of one man had forged them into a deadly weapon. But like all such weapons, it could not be held poised indefinitely, even by such a man as the Kha Khan. Once drawn it must be used—and the nomad leader did not hesitate to strike with it at the mighty Chin Empire.

So the toumans turned south, and before long the standard with the nine white yak tails stood within the Wall. For the Great Wall was meant to keep out small parties of marauders, not an invading army under such a leader as Genghis Khan. The early campaigns were merely raids on a huge scale-defeating armies and causing wide-spread destruction - but leaving the great walled cities alone. However, these were not to escape for long. As the Mongols gained experience (they also made intelligent use of captured or rebellious Cathayan soldiers and engineers) they successfully laid siege to many cities. At last their repeated onslaughts frightened the weak occupant of the throne of the Golden Emperor and he fled (c. 1214). In the resulting confusion the Mongols again moved into Cathay in force, and the great Chin Empire collapsed in blood and fire. Fortunately for the Cathayans a courageous and wise man, Ye Liu Chutsai, had been brought prisoner before Genghis Khan, who had been impressed by his bravery, bearing, and his loyalty to his fugitive master. This man came to have great influence with the Mongol ruler

rulers, for he served Ogadai, too). His restraining ufluence on the savage and greedy barbarians relited in saving the lives of millions. As adviser and, ter, the leading minister of the new Mongol emire, for thirty years he was able to do much to moderate the destructive policy of the Khans toward the conquered peoples. To him is due the preservation of the remnants of the Chin Empire, and the establishment of a government for the newly acquired territory. "You can conquer an empire in the saddle," he said to have told the Kha Khan, "but you cannot overn it so." It was in the tradition of his teaching that Kublai Khan, grandson of Genghis, ruled his vast mpire, embracing all China, Korea, Mongolia, Tibet, and much of Siberia.

The Kha Khan's next move (1219) was against the reat Khwarismian Empire. This included what is ow Iran, Afghanistan, Turkestan, and parts of northm India. The invading army, which may have numered 150,000 men, was in four columns. The Shah Indhammed, threw away the advantage his numerical aperiority gave him by trying to defend the long line of the frontier on the river Sir Darya.

The famed Mongol general Chépé Noyan led vo toumans through the hill country against the hah's right flank, while the other three columns took more northerly route. Two of these, under the Khan's ons, Juchi and Chagatai, upon reaching the Sir Darya, turned south, taking the frontier fortresses as ney went, and joined hands with Chépé before Samrkand. The Shah had scarcely formed to meet this reat when Genghis Khan appeared, as by a miracle, ith four toumans, in his rear. He had crossed the ir Darya and vanished into the great desert of the Lizyl-kum, emerging unheralded at the very gates of okhara. This masterly move completely shattered ne Khwarismian plans for defense. The Shah fled, nd Bokhara, one of the greatest cities of Islam and a enter of Moslem culture, fell in an orgy of rape, masacre, and arson. Samarkand suffered the same fate, s did city after city. In five months the main armies f the empire had been overthrown, and cities, which ad numbered their inhabitants in hundreds of thouands, were but heaps of deserted ruins. Probably ever before or since has a populous country been urned into such a desert in so short a time.

Then took place the greatest cavalry pursuit in hisory, for the Kha Khan ordered Chépé Noyan and the veteran Subotai, with two toumans, to follow the hah and find him, dead or alive. From Samarkand to Balkh, in the foothills of the great ranges of Afhanistan, the chase led, and from there, five huntred miles west to Nisapur. The spring grass was good and each trooper had several remounts. It was as well, because at times they must have covered seventy or eighty miles a day. They made a furious attack on Nisapur, but the Shah had fled and again the tireless Mongols took up the hunt. Westward they went, taking towns and beating a Persian army, half again as strong as their own, near what is now Tehran. The Shah started for Baghdad, but the Mongols were close now, within arrow-shot at one place. He then headed north, for the Caspian. There, after another hairbreadth escape, he found shelter on an island, where he soon after died.

Permission for an advance toward the West was now asked and granted via courier, and the two generals turned north through the towering ranges of the Caucasus. They fought their way through the mountains of Georgia, crushing the Georgian Kingdom. Cutting their way through the passes of the Caucasus, they defeated an army of Alans, Circassians, and Kipchaks. Riding north, they were met by a Russian army, under the Dukes of Kiev, and Galicia, which had descended the Dnieper to meet them. On the banks of the Kaleza, this army was defeated-the first clash between the Mongols and the West - but resistance must have been stout, for the wandering generals now turned down to the Crimea, where they won the friendship of the Venetians by destroying the trading towns of their rivals, the Genoese. Then at last, in answer to a summons from the Kha Khan, they turned for home. Chépé died on the way, but Subotai brought the troopers back, loaded with booty, traveling around the northern end of the Caspian. The raiders had been gone for more than two years, and had covered a vast amount of territory. In accordance with Mongol custom, they undoubtedly recruited from some of the nomad tribes en route, as well as supplying themselves with remounts, and it is most likely that they returned in greater strength than when they set out. For the Europeans, it was a dire warning of disaster to come, for the wily Subotai was obsessed with the idea of leading the Mongols to the conquest of the West.

Meanwhile, the Kha Khan had been relentlessly completing his conquest of the Khwarismian domains. The gallant Jelel ed-Din, the Shah's son and successor, suffered a final defeat in a last great battle on the banks of the Indus, escaping only by jumping his horse from the bank twenty feet down into the stream and swimming to the southern bank. He was hunted down almost to the gates of Delhi, but heat and disease checked the Mongol pursuit, and, after laying waste Lahore and Multan, they returned to the north. The great empire was now utterly de-

stroyed. All centers of resistance had been wiped out and city after city obliterated—it is said that over 1,500,000 perished in the taking of Herat. Allowing for exaggeration, it gives an indication of the horrors of the Mongol terror, and the size and prosperity of the cities of the empire.

Aside from the inhuman slaughter of millions of noncombatants, the defeat of the Khwarismian empire was a remarkable achievement. The bold use of widely scattered forces, carrying out a strategy of envelopment on a gigantic scale, over the most unfavorable terrain, showed both skillful planning and daring execution, plus a shrewd estimate of the weaknesses of the enemy. Tactically, although we have no detailed knowledge of the actual fighting, the Mongol military machine seems to have functioned perfectly. Not only that, but the problems of organization and supply were immense. It is more than 250c miles as the crow flies, from the Mongol homeland to Bokhara; yet the thought of marching a great army such a vast distance did not daunt the Mongol leaders in the least. To those who live in the wide plain countries, distance means little, and the Mongol generals thought no more of sending a touman across 90 degrees of longitude than would the British Admiralty of ordering a squadron to proceed from Portsmouth to the Cape. It was this disregard for distance, this complete independence from lengthy and tenuous lines of supply that enabled the Mongols to bewilder their opponents by the seemingly magical appearance of armies where they were least expected. This, and the almost incredible speed with which they moved, gave rise to the belief - once widely held that the Mongol armies were of enormous size. By no other means could the historians of the times explain their overwhelming victories and the rapidity of their thrusts. In the age of lumbering feudal armies, slow to mobilize, slow on the march, and, because of divided command, slower still to concentrate, the well-oiled Mongol machine must, indeed, have smacked of black magic. And if occasionally the men from the steppes were equal or superior in numbers on the battlefield it was because their speed and maneuverability enabled their leaders to effect combinations completely beyond the capacity of their opponents.

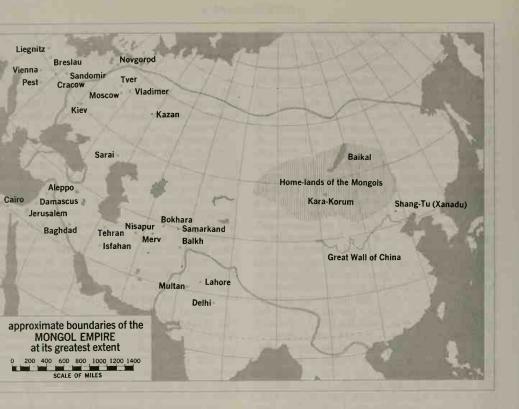
Subotai

The European campaigns of Subotai — one of history's great commanders — are a good example of what can be accomplished with a superb weapon in the hands of a master.

The army with which he started his campaign (1236) probably numbered some 150,000. Losses in preliminary fighting, from disease, and those troops left to guard communications, very possibly reduced the numbers of those which invaded central Europe to about 100,000. They were a mixed lot racially—the ranks of the original Mongol Banners had been thinned by years of almost incessant fighting and the numbers made up with Turks, Kirghiz, Bashkirs, and other steppe-dwellers. There were also numbers of Chinese. These would all, however, be seasoned troops, under Mongol officers and Mongol discipline—and with probably a good stiffening of veterans from the earliest campaigns.

Genghis was dead (1227) and his son, Ogadai, ruled in his stead, but the work of conquest still went forward. Batu, grandson of Genghis, was nominal leader of this new tide of invasion. The thrust would start from the territory around the Volga which was under his control, and where his followers were already known as the Golden Horde. But the real leader was the old veteran, Subotai.

Characteristically, the wily old leader struck in the depth of winter, when the frozen rivers would present no barrier to his movements and when the Russians, like all sensible people, would be gathered in their cities and villages, unsuspecting of attack. The valiant nobles and princes of the independent lands which made up the Russia of those days were in no way equipped, mentally or materially, to deal with a Mongol army with a man like Subotai at its head. Town after town went up in flames, while by the light of the burning buildings the inhabitants were hunted down and slain. In three months the free states of central Russia were obliterated. Only swamps, thick forests, and incessant rain saved the great city of Novgorod (Moscow had been burned weeks before). Then the Mongols turned south, out of the forested regions, toward the steppes of the Black Sea. While some scouted the Crimea, other detachments moved into the Caucasus, where they made contact with the Mongols of the Army of Northern Persia. Meanwhile Russia was being "organized" in the usual thorough Mongol manner. Furs, hides, grain, slaves-all were



abulated by the Uighur and Chinese secretaries, and ne figures transmitted via courier to the far-distant eadquarters in the Gobi. For the looting of the Monol conquests had been reduced to a system. Exerience, and the wisdom of their captive sages, ad taught them the folly of killing the geese which aid the golden eggs, and after the initial slaughter, ne cowed and terrorized survivors were allowed to ve — to produce for their masters. In fact, a universal eace existed throughout the empire of the steppes a sort of Pax Mongoliea. A most efficient system of ost houses and relay stations was set up along the ld caravan routes and across the steppes to the West. long these routes flowed increasing streams of trafe — the ever-growing number of government officials, nerchants, ambassadors, tribute bearers, prisoners, oldiers, and most important of all, the couriers. These ast, the Pony Express of Asia, were picked men who ould cover great distances, pausing only to change orses. A few years later Marco Polo described the ost stations:

". . . furnished with everything necessary, and provided with the usual establishment of horses. He sent people to dwell upon the spot, in order to cultivate the land, and attend to the service of the post; by which means large villages are formed. In consequence of these regulations, ambassadors to the court, and the royal messengers, go and return through every province and kingdom of the empire with the greatest convenience and facility; in all which the grand khan exhibits a superiority over every other emperor, king, or human being. In his dominions no fewer than two hundred thousand horses are thus employed in the department of the post, and ten thousand buildings, with suitable furniture, are kept up. It is indeed so wonderful a system, and so effective in its operation, as it is scarcely possible to describe. . . .

If Marco exaggerated the number of post houses and horses, (and perhaps he did not), to a traveler from a communication-poor Europe the whole system must have appeared fantastic.

In the winter of 1240, the Mongols renewed the attack on Russia. Kiev was the first victim; and when the great city had been reduced to a smoldering ruin, filled with the corpses of its inhabitants, the Mongols pushed on to the foothills of the Carpathians, driving the terrified Slavs before them. The tales of the miserable refugees had alarmed the rulers of the West, and they were further disturbed by the news that the Mongols had raided as far as Sandomir in Poland. There was a great furbishing of arms, mustering of feudal armies, and marching of men throughout all Central Europe. The trouble was that while the warriors of Poland and Bohemia and Hungary and Germany marched, the Mongols rode. And rode fast-for Subotai had planned a daring four-column sweep which would have the effect of clearing his flanks and checking and dispersing his enemies, while covering the main assault on the chief concentration of the forces of the Hungarians near Pest. Whether the Mongols had seriously considered the actual conquest of all Europe is a question which will never be answered. In all probability they had not, and the campaigns in Poland and Bohemia were merely to smash all forces capable of a counterattack and to create a no-man's-land between Central Europe and the Russian conquests and the steppes to the south. The plains of Hungary may have attracted them as a permanent acquisition, and it is certain that they considered that kingdom a prime target.

Whatever the long-term policy, the campaign itself was a masterpiece. The army of the right wing, under Kaidu, one of the sons of Ogadai, moved into Poland across the Vistula and, at Szydlow, defeated the Slavs of Prince Mieceslas and the Poles under Boleslas. Cracow was taken and burned, and the Mongols swept on over the Oder and took Breslau. The decisive battle of this part of the campaign was fought at Liegnitz. Here Duke Henry of Silesia had massed his Germans and Moravians, with local contingents, and the Teutonic Knights. To the south, Wenceslas of Bohemia - the Good King of the Christmas carol -was marching with all speed to join him. The junction was never made. While the Bohemians were still one day's march away, the Mongols routed Henry completely, slaying him and all but a few of his followers. Wenceslas prudently turned back, and took up a defensive position. Kaidu turned south for Hungary, ravaging Moravia as he went. His Mongols had marched over four hundred miles, fought two great battles, destroyed four large cities and conquered much of Poland and Silesia - all in less than a month.

The marches of the three other columns were arranged so that they would effect a junction near

Pest. Two pushed through and around the Carpathians to the South while Subotai himself, moving last as his course was more direct, launched the main force directly on Pest. The day after the junction of the three Mongol columns, the Hungarians, under their King Béla, and their allies finally advanced out of Pest. The wily Subotai retired slowly, drawing the overconfident Hungarians after him. The Christians, numbering perhaps 100,000 men camped by the river Sayo. The Mongol army was somewhere across the river, but during the night Subotai forded the river and surrounded Béla's camp. Furious charges by the Christian knights and men-at-arms were met by the usual wearing tactics of the nomads, who only closed when the deadly arrows had done their work. The Europeans seem to have had little in the way of missile power to counteract the Mongol archery. The ranks of the knights were gradually thinned, and the great mass of foot soldiers in the camp were becoming restless and discouraged under a storm of missiles to which they could not reply. Finally the great Christian army began to retreat - a movement which ended in the inevitable rout. Seventy thousand are said to have died in the battle and the pursuit, and the Hungarian kingdom was conquered at a blow.

Whether the disorganized forces of the West could have rallied to meet a farther thrust is a matter of opinion. Fortunately, besides forays into Austria, one of which circled Vienna and reached Neustadt, and a raid which reached the Adriatic, the Mongols seem to have made no attempt to follow up their victories. In February 1242 a courier from the East reached Subotai's camp on the Danube, bringing word of the death of Ogadai, and summoning him and the Mongol princes to a kuriltai at Kara-Korum. In two and a half months the news had been carried almost five thousand miles. On receipt of it, the old Mongol turned his horse's head once more toward the rising sun. Systematically laying waste the country as it went, the army began the long journey to the homeland. As the Mongol Banners vanished into the East, never to return, the princes and peoples of Europe breathed a sigh of relief. The advent of the horde of slant-eyed horsemen had been like a nightmare; now they were gone, as mysteriously as they had come. Their invasion drastically altered the racial and political map of Central Europe, and the effects of their long dominion over much of Russia has been felt to this day.

Kublai Khan

The Mongol conquest was not over, for under Kublai, randson of Genghis, who became Kha Khan in 1260, he conquest of China was completed. But the cenralized family government, as visualized by Genhis, was unworkable. The vast distances involved ad much to do with the final division of the Mongols, long with family quarrels and self-interest. So the escendants of the Khans ruled in their own lands, nd no more attended the family council in the Gobi. Tublai himself became almost as much Chinese as Mongolian. He had long given up the nomad life, nd had traded the discomforts of the felt yurt for the plendors of Xanadu. Hulagu, his brother, had overbrown the Caliph of Baghdad, taken Aleppo and Danascus, and with his allies, made ready to embark on he conquest of Egypt. Here were strange bedfellows! Iulagu and his Mongol horde, Christian crusader nights, Armenians and Georgians, all in amity narching to the conquest of Jerusalem and Cairo. 'he invasion was never made. Mangu Khan, Hulagu's prother, died, and the inevitable summons called the nvader back to the Gobi. He left his second in comnand, Kit Boga, to invade Egypt, but to the astonishnent of the whole East, that unfortunate general was lefeated and subsequently slain by the Mameluke Baibars (who had, at one time, served in the Mongol rmy) and his Arab forces from Cairo. It was the irst major setback to the Mongol arms in nearly forty ears and the news of it made Hulagu turn and gather orces for the utter destruction of Egypt. But while ne was negotiating with the princes of the West for a mited move on Islam, he died - some say by poison dministered by a Moslem. Whatever the cause of his lemise, the threat of Mongol invasion vanished, and nistory was denied the sight of a pagan Mongol retoring the Holy Sepulchre to the Christians of the West. It is a measure of the power and enormous extent of the nomads, that one army should be engaged in Palestine while others were battling in outhern China and Korea.

The obvious superiority of the Mongol armies over hose of their contemporaries lay partly in the inlividual soldiers, partly in their armament, and a very great deal in their organization and leadership. Of the Mongol troopers, Marco Polo wrote:

"They can march for ten days during which time they subsist upon the blood drawn from their horses, each man opening a vein and drinking from his own cattle."

The European man-at-arms of that day was none too well fed—but it is doubted if he could, or would, have put up with horse blood as a substitute for beef and bread, nor would the following have sustained a stalwart German or Russian for very long.

"They make provision also of milk, thickened and dried to a hard paste . . . Upon going on service they carry with them about ten pounds per man, and of this, half a pound is put, every morning, into a leather bottle with as much water as is thought necessary. By their motion in riding the contents are violently shaken, and a thin porridge is produced, upon which they make their dinner."

This acceptance of a diet that would have driven most Westerners to mutiny or desertion was one of the Mongol trooper's chief assets. It also explains the ability of the Mongol high command to plan and execute incredible forced marches which no European troops, with their hampering supply trains, could begin to equal.

In the matter of weapons—all contemporary writers agree that the Mongol bow was a particularly powerful and deadly weapon. Presumably all the European armies would have had at least some cross-bowmen, but the Mongol bowman could discharge many shafts to the crossbowman's one.

Aside from the bow, the Western man-at-arms was equal in physical strength and courage and in many cases, better armed and armored. As the Mongols took care not to engage at close quarters until their opponents were worn down, this made little difference. The real reason behind the Mongol successes was, of course, their superb discipline and tactical organization. Compared to those of the barbarians, the feudal armies were little better than armed mobs. Only the disciplined armies of Byzantium in the best of her days could have opposed the Mongols with a good chance of success. And such armies had not existed for some centuries.

Their long series of victories had given the Mongol soldiery great confidence in themselves and in their leaders—an esprit de corps which was woefully lacking in the average feudal levy. They were also fortunate in having at their head some of the finest strategists of any age. It is seldom that so many characteristics of the perfect fighting man are found at one time. Here were physical toughness, courage, disregard of death, discipline, extreme mobility, a superiority in weaponry, tactics, and organization, and splendid leadership. The combination was, and is, unbeatable.



THE BOWMEN OF ENGLAND

as war itself. It may be difficult, therefore, to understand why the appearance on the battlefield of a comparatively few bowmen should have won them such a lasting place in the history of the English-speaking peoples. Perhaps one reason is that for centuries their exploits have captured the imagination of historian and reader. In other words, they have had a good press. There is always sympathy for the underdog, and there is a certain pleasure in reading of men of peasant stock sinking a clothyard shaft into some haughty knight or baron. But the Swiss were peasants too, and humbled many a proud duke, yet they have not received a fraction of the popular ac-

claim accorded to the yeoman-archer. It may be the weapon itself. There is something about the bow which appeals both to the primitive and to the aesthete in us—and while archery is the sport of thousands, there is little enthusiasm for the pike. Whatever the cause, the place of the English longbowman is secure, as secure as that of King Arthur and Robin Hood.

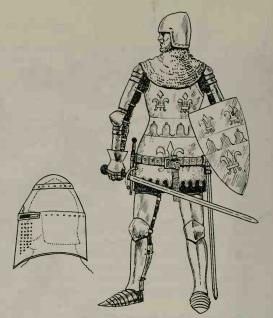
The origin of the longbow is obscure; it very possibly was developed in the southern part of Wales. Accounts dating from the middle of the twelfth century speak of Welsh bows capable of sending arrows through four inches of oak. To drive a shaft through such a thickness of tough wood calls for an excep-

tionally powerful weapon. Now, a lot of nonsense has been written about the longbow and what it could do. Only two, of all the tens of thousands made, have survived, and these were of a much later date. They were recovered from the wreck of the Mary Rose, which went down in 1545, and are preserved in the armory of the Tower of London. They measure sixfoot-four and three-quarter inches and are correspondingly heavy throughout. Saxton Pope, the famous American archer who hunted big game with the bow all over the world, as well as testing native bows of all descriptions, made an exact replica of one of these bows out of seasoned yew. The finished bow weighed (in archer's parlance this means the number of pounds required to pull an arrow to the head) 76 pounds, when drawn 36 inches, and shot a flight arrow 256 yards. The average archer today uses a 28 inch arrow, drawn to the point of the jaw under the eye, but the English bowman used a clothyard shaft, that is, one 37 inches long and drawn to the ear.

Now Dr. Pope was a powerful man, and the average weight of his hunting bows was some 75 pounds (the average American hunting bow today pulls between 45 and 50 pounds). Admitting the fact that a person whose whole life had been devoted to the bow could do better, we are still not going to get any fantastic increase in range or power. As a matter of fact, the art of bow-making has improved so much in the last few years that the modern bow is as superior to that of Crécy and Agincourt, as is the modern rifle to the flintlock.

So let us grant our English bowman an extreme range of 300 yards. At that distance, any "slitting of the willow wand" is impossible. A volley of arrows directed at a mass array, however, might score some hits. The impact of an arrow, or any missile, has as much to do with its weight as its velocity, and the clothyard shaft with a steel head was fairly heavy. Its penetrative power was good therefore, and at extreme ranges, it could wound, if not kill. But at that distance it would not penetrate armor, and so at long ranges its chief use was to destroy the enemy's mounts—that is, his mobility.

At the time of Crécy, and well into the fifteenth century, the horse was protected only by cloth bardings, if at all. It was not until the armorer's art had reached its peak (about the middle of the fifteenth century) that horse armor could be made light enough so as not to unduly hamper the animal (already weighed down with some 250 pounds of armed rider and equipment) and still to afford sufficient protection. A horse did not have to be killed to put it out of action. In fact, many an orderly array has been



Armor of mid-fourteenth century (transition from mail to plate). The camail was fastened to bascinet. The breastplate was covered with a jupon of silk or velvet. The great Heaume (not always worn) was padded where it rested on the bascinet

thrown into utter confusion by the kicking and plunging of horses stung by random long-range shafts.

The effect of an arrow on armor depends on the range, but more particularly on the type of armor and on the angle at which the arrow strikes. The armor in style in the mid-fourteenth century was of the mail and plate type (the so-called transition period). Mail could keep out a shaft at long distance, but at close range even the best could be penetrated. The by now famous experiment in which Dr. Pope shot at close range at a fine suit of Damascus mail an attendant who had offered to wear the suit is said to have turned pale green at the result - showed that a bodkin-pointed arrow, i.e. an arrow with a thin, narrow-diameter head, penetrated not only the mail but an inch of wood besides. Plate was another matter, and if the angle was too great, the arrow glanced off. The splendid Gothic armor of the mid-fifteenth century was especially designed with this end in view, and this period also corresponds with some decline in effectiveness of the English archery.

"To return to the development of the longbow in England. It is certain that it did not stem, as some authorities have maintained, from the Norman bows used at Hastings. Both these and those used by the Saxons were of the type used by the Norse; that is, short bows drawn to the breast, rather than to the ear. The fact that at the time of Richard I the cross-bow was the accepted missile weapon proves this. For the Lion-Hearted – whatever his shortcomings as a sovereign – was a fine soldier, and the longbow, had it been common in England, would have made an effective weapon against the Saracen horse-archers. King John may have been wicked (none of us would have wanted any Angevin as a ruler, or even a neighbor) but as a general, he was no fool, and in his day also the crossbow was the prime missile weapon.

It is not until the reign of Henry II (1133–1189) that the longbow is mentioned, and then in the hands of Welsh archers. Richard de Clare, nicknamed Strongbow (the name itself is significant) employed Welsh archers in his wars in Ireland and with their help, took that eastern part afterward known as the Pale.

But it was at Falkirk (1298) that the longbow steps into history. Edward I, no stranger to the power of the Welsh bows, had with him on this campaign a body of Welsh bowmen. These erstwhile enemies (Wales had been but lately subdued) caused some trouble and, after an "altercation," in which several priests perished while trying to maintain peace and quiet, threatened to march off and join the Scots. It was fortunate for the English they did not.

William Wallace, one of Scotland's great heroes, had drawn up the unarmored spearmen, who made up most of his army, in deep masses or schiltrons, similar to the hedgehogs of the Swiss. His own archers (Scottish archers never seem to have counted for much) were stationed between these formations, and a small force of cavalry covered the rear.

The English horsemen advanced—one wing having to make a wide detour round some swampy ground. The other, under the Bishop of Durham, was halted to wait for the arrival of the King with the main battle. With typical obedience and discipline, the barons, adjuring the Bishop to leave ordering warriors and to go and say his Masses, charged the Scottish spears and were bloodily repulsed. The other wing suffered a like fate, but the King, mindful of his lessons in the Welsh hills, brought up his archers. The Scottish bowmen and Wallace's cavalry had been driven off at the first onslaught and now the defenseless spearmen stood while the deadly arrows whizzed and thudded into their dense ranks.

Nobly the Scottish foot held steady, while great gaps appeared in their array. Then the mailed horsemen came on once more, and this time the schiltrons broke. The survivors fled and Wallace was taken to die a cruel and undeserved death. The longbow had arrived.

The battle set the pattern for other victories, and with the notable exception of Bannockburn (1314), the same story was repeated at Halidon Hill (1333), Neville's Cross (1346), Homildon (1402), and Flodden (1513). In each case the stubborn Scottish spearmen were held by mounted charges, or threats of charges, while their ranks were riddled by archery. That he "Carried twelve Scots' lives at his girdle" was the brag of many an English archer.

The English disaster at Bannockburn was due entirely to miserable generalship on the part of Edward II. In this case the Scottish King, Robert Bruce, was able to send his massed spearmen down on the disorganized English, who had spent most of the preceding night crossing the Bannockburn and its swampy flats, and were not yet in battle order when the Scots attacked. Some few of the English archers got into position, but unsupported, were ridden over by the Scottish knights. The rest of the army was broken and utterly routed, many of the survivors being drowned while trying to recross the stream.

The lesson was plain to see. To be effective the bowmen must be supported, especially from sudden cavalry attacks on their exposed flanks. Fortunately for English arms, the next Edward was soldier enough to see it very well, and the battle in which he demonstrated the deadly power of the English bowmen was a masterpiece.

The details of the Plantagenet's claims to the French throne are involved and wearisome, and the campaigning which led up to the victory at Crécy unimportant to this story. Suffice it to say that the year 1346 saw the third Edward with his army brought to action by a much larger French force under King Philip VI of Valois. No authorities agree as to the exact numbers. The contemporary historian, Froissart, in one account gives the English strength at 2300 knights and men-at-arms, 5200 English bowmen, and 1000 Welsh light troops or dagsmen (the longbow seems to be henceforth an English weapon, and the Welsh appear as lightly-armed skirmishers). The total, with grooms, servants, squires, etc. was probably around 11,000. The French are estimated to have had some 60,000 men, including 12,000 knights and menat-arms, 6000 hired Genoese crossbowmen, 20,000 armed militia and the usual rabble of feudal retainers. There were also contingents of knights and retainers from Luxembourg, Bohemia, and other parts of the Holy Roman Empire.

Edward had drawn up his army in three divisions, or battles. The young Prince of Wales on the right, the Earls of Northampton and Arundel on the left, while the King held the third in reserve. In each division the center was held by dismounted knights, with archers on each wing. The King's battle did not come into action at all, so the day's honors fell to the 1600 armored men, the Welsh, and the 3000-odd archers of the first two divisions.

It was late in the day when the French came up, and it was decided to halt the army for the night and array it for battle in the morning. However, a feudal mob such as the French King commanded was not ordered so easily.

"The King commanded that it be so done," wrote Froissart, "and the two marshals rode, one toward the front, and the other to the rear, crying out: 'Halt banners, in the name of God, and St. Denis.' Those that were in the front halted; but those behind said they would not halt, until they were as forward as the front. When the front perceived the rear pressing on, they pushed forward; and neither the King nor the marshals could stop them, but they marched on without any order until they came in sight of their enemies."

The English, who had been sitting quietly on the grass, now rose and fell into their ranks. The French King, seeing that battle was now inevitable, ordered the Genoese crossbowmen forward, while behind them the foremost of the men-at-arms got themselves in some sort of order for the attack. Like the rest of the French army, which had been marching since daybreak, the Genoese were tired. They complained that "They were not in fit condition to do any great thing that day in battle." To add to their discomfort, a violent thunderstorm deluged the field, wetting their bowstrings. Then the late afternoon sun broke through under the clouds, shining full in the face of the French.

"When the Genoese were somewhat in order, and approached the English, they set up a loud shout, in order to frighten them; but they remained quite still, and did not seem to attend to it."

It is a picture that many reading these lines must have tried to visualize: the silent ranks of the English, the sun behind their backs and the lengthening shadows streaming down the slope; the mass of Genoese surging forward with their unwieldy weapons at the ready, while behind them the sun lights up the burnished armor, the brilliant surcoats and the tossing banners of the French van.

Three times the Genoese shouted, then raised their bows and began to shoot. Then a small cloud seemed

to rise from the English ranks, casting a light shadow over the Genoese, and an instant later was heard, for the first time on French soil, a sound that was to become all too familiar to French ears—the whistling hiss of thousands of steel-tipped shafts. The arrowstorm smote the crossbowmen with deadly effect.

"When the Genoese felt these arrows, which pierced their arms, heads and through their armor, some of them cut the strings of their crossbows, others flung them on the ground and all turned about and retreated, quite discomfited . . . The King of France, seeing them thus fall back, cried: 'Kill me those scoundrels; for they stop our road, without reason.'"

The horsemen of the first line plunged into the panic-stricken mass of mercenaries, riding them down and slashing right and left. In an instant the whole French line was a struggling disorganized mass of shouting, screaming men. Louder still came the screams of the stricken horses—for the shafts hissed and thudded into the mob in an unceasing stream (a trained archer can shoot twelve shafts in a minute with ease, and there were many hundreds of archers).

Here and there groups of horsemen broke clear and charged up to the English line, but few reached it. The deadly shafts sought them out, bringing down their horses in struggling heaps, and piercing mail and plate and flesh.

When horses crashed to earth near the English line, the Welsh dagsmen slipped out through the ranks and dispatched the mailed riders as they struggled to rise. Walls of kicking horses and dead and dying men arose, blocking those behind who still surged on to the assault. There was no order or coherence to these attacks. As each fresh company of knights arrived on the field they charged furiously up the blood-soaked slope—to be stricken in their turn, while still others pressed on from the rear.

Only once did the French succeed in reaching the Prince's men-at-arms on the right division, and here they were beaten back after a hard fight. A messenger was sent to the King, asking him to come to the Prince's support, but on learning that he was unhurt the King refused, saying he wanted the glory to be all his son's. Here fell the blind King of Bohemia, with his slain charger fastened to that of the knight on either side of him.

As night fell, the attacks began to weaken. The French losses had been terrible, and Philip, who had had one mount killed by an arrow, was persuaded to leave the field. Even then the slaughter was not ended, for at daybreak, in a heavy fog, a strong English detachment scouted the field and came upon fresh bodies of militia and men-at-arms

hastening to the scene, unaware of the defeat of the evening before. These troops, with others who had become separated from their comrades in the battle, were dispersed with great loss.

"The English put to the sword all they met; it has been assured to me for fact, that of foot soldiers sent from the cities, towns, and municipalities, there were slain, this Sunday morning, four times as many as in the battle of Saturday."

Later in the day, King Edward sent out heralds and secretaries to count and record the dead.

"They took much pains to examine all the dead, and were the whole day in the field of battle, not returning but just as the King was sitting down to supper. They made to him a very circumstantial report of all they had observed, and said they had found eighty banners, the bodies of eleven princes, 1200 knights, and about 30,000 common men."

Some fifty English fell in the battle. Allowing for some exaggeration, it is evident the losses were out of all proportion. The "common men" included, of course, the unfortunate Genoese and the militia killed the next morning as well as any camp followers, grooms, pages, serving men, vendors, etc. who could not make good their escape.

The chivalry of France were slow to learn. Rather than admit that the flower of the French nobility had gone down to defeat at the hands of base peasants, they conceived the idea that the English success was due to their massed array of dismounted knights. When they met again at Poitiers ten years later, the French King John kept only two small bodies of knights mounted, and ordered the others to shorten their lances, remove their spurs, and fight on foot.

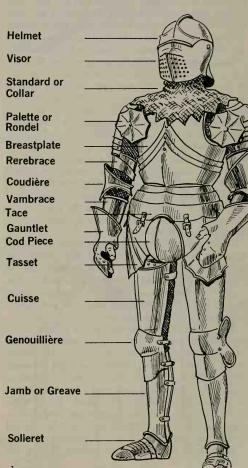
This was not the answer. Contrary to popular belief, armor was so constructed that a man could move freely; bend, stoop, run, even vault into the saddle, but it was not made for marching. The only result was that when the French reached the English positions they were tired.

As at Crécy, the French generalship was bad. Although outnumbering the Black Prince's force almost three to one, John elected to fight on a narrow front—with his knights and men-at-arms in three great battles—one behind the other. A body of mounted knights, who charged first, were riddled. Their rout disorganized the leading division and when these finally shuffled up to the English lines, they were beaten back. The second division, seeing the repulse of the first, broke up and retired. The third, under the King himself, came on boldly, but the Prince (whose archers had probably by this time shot away their arrows) mounted his knights and charged the King. A

sharp fight followed, but the appearance in the French rear of a small force of knights, previously detached by the Prince for this purpose, threw the French into confusion. The King was taken, along with his son and some 2000 lords, knights, and menatarms; while the bodies of about 3000 strewed the battlefield.

The worth of the English bowman had been fully proved and the French now tried to avoid general engagements, preferring to use stratagem rather than head-on attacks. Under the famous Du Guesclin—who was a soldier in the real sense, and not a mere feudal lord with head stuffed full of notions of pride

Gothic Armor—fifteenth century



and chivalry - the French succeeded in winning back nuch of what they had lost. Then came Henry V and the smashing defeat of Agincourt in 1415.

The story of Agincourt is the story of Crécy and Poitiers - disorganized attacks on a narrow front; three divisions, one behind the other, the first two lismounted, just as at Poitiers; and also like Poitiers, he infantry and crossbowmen stationed behind each livision, where their fire was masked. Two mounted squadrons advanced first and were shot down (the French seemed to have forgotten a great deal in fiftynine years) and the dismounted knights of the first livision then slogged wearily through the ankledeep mud toward the English line. They suffered severe losses from the archery during the approach, out many reached their objective and the lines were neavily engaged. The fighting was severe, and here again the sturdy English yeomen proved their mettle. Casting aside their bows, they laid on with sword and axe and maul. (To protect themselves against cavalry, t was customary for the bowmen to provide themselves with stakes, which they drove into the ground at an angle. Therefore many carried slung at their backs a long sledge, or maul.) With these instruments, half tool, half weapon, which could smash the steel carapace of a man-at-arms as easily as a fisherman cracks a crab, the archers laid about themselves lustly. In ordinary circumstances, one fully armored knight had little to fear from a man with no more protection than a steel cap and perhaps a quilted acket, but the average armor of the period weighed sixty or seventy pounds, and a man so encumbered tires fast. So it often happened that the nimble archers could bring a steel-clad warrior crashing down as woodsmen do a giant tree.

The first division was reeling back when the second came up and the inevitable confusion ensued - exhausted and wounded men trying to make for the rear through the ranks of fresh troops pushing forward. The shaken second division fared no better than the first, and the third broke up and drifted

away without striking a blow.

The numbers were as unequal as before-more than four to one in favor of the French-and the casualties were even more disparate. The French losses are said to have totaled some eight thousand men of family, including the Constable of France, three dukes, five counts and over a hundred barons, while another thousand were taken. The English losses were put at thirteen knights and men-at-arms, including the Duke of York, and about a hundred archers and footmen.

In view of the heavy hand-to-hand fighting the

small number of casualties among the English knights and men-at-arms is surprising. Granted that the French arrived at the English line shaken by archery and winded by the long tramp through the mud. Granted, too, that English knights who fell wounded or exhausted were safe, whereas a fallen Frenchman would probably be finished off by a dagger thrust in the armpit or through the slits of the visor. Even so, the great disparity in losses can only be explained by assuming that the casualties inflicted by the archers were very severe.

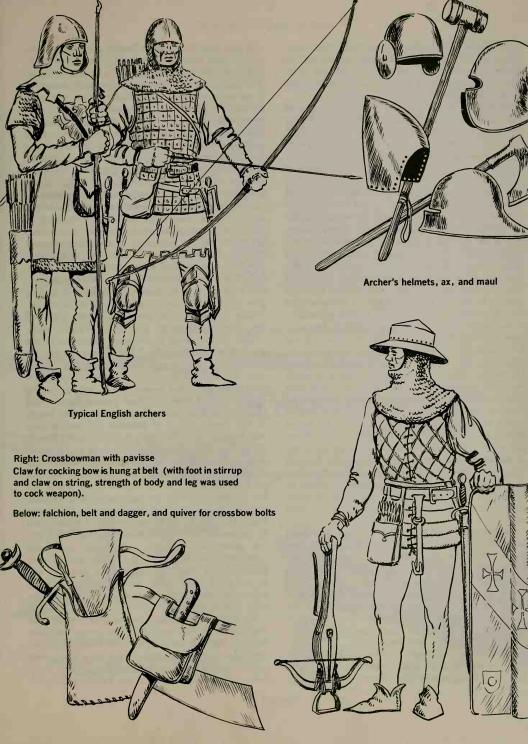
In one way, the dismounted attack was more likely to succeed than the charge of a division of mounted men. The horse was far more vulnerable than the armored rider, was capable of causing much more panic and disturbance if wounded or frightened, and once down, kicking and struggling, formed a formidable barrier. On the other hand, the way to avoid loss in crossing open ground under fire is to cover distance in as little time as possible, and the slow progress of the slipping, stumbling men of the French divisions must have made them ideal targets.

There is also the fact that in almost all battles before the day of the musket, the losses of the vanquished were very high in proportion to those of the victors. Casualties in shield-to-shield, hand-to-hand, combat might be high but they were often fairly even. It was when one side broke and ran that the slaughter

really began.

Other French defeats followed: Cravant (1423), Verneuil (1424), St. James de Beuvron (1426), and Rouvr (1429). The reputation of the English bowmen rose to the point where the French were half-beaten before the battle began. But Henry V had died in 1422, and the enmity between the houses of Lancaster and York broke into open warfare. The Wars of the Roses, in which the nobility all but destroyed themselves, did not permit the carrying on of full-scale warfare in France. The small forces there were neglected, at a time when the morale of the French was raised (and that of the English correspondingly lowered) by their belief in the supernatural powers of the maid called Joan of Arc. The French thought she was a saint, and the English believed she was a witch, but the effect on morale was the same in both cases.

A new type of professional soldier was coming to the fore in France, and new tactics took advantage of the weakness of the English position. For, unlike the Swiss pikemen, whose shock tactics demanded they always attack, the English won their victories when on the defensive. The French leaders had finally learned that to attack an English force, when the archers had time to draw up in their ranks and



plant their stakes, was to invite disaster. But a country cannot be conquered by defensive tactics, and the combination of the bow and some such weapon as the pike, which might have given the archer both mobility and protection, was never developed.

An English defeat at Patay (1429) proved again that archers unprepared and unsupported can be ridden down by a sudden charge. The Hundred Years War was drawing to a close, and would end with England holding only Calais. But the longbow was as deadly as ever, and archers wearing the badges of York and Lancaster loosed their shafts with as deadly effect on their own countrymen as they had on the French and Scots.

The English longbow was still the world's deadliest missile weapon when the eighth Henry demonstrated his prowess as an archer at the Field of the Cloth of Gold. "A marvelous good archer, and a strong," as a French contemporary wrote. Henry also had laws enacted requiring his subjects to practice with the bow and at a range of no less than one furlong. It was not until the last years of the century that the famous old weapon made its final appearance at an English muster. The forces raised in Devon to meet the Armada emergency had 800 bows, but the firearms numbered 1600.

In 1590, Sir Roger Williams wrote in his Briefe Discourse on Warre: "Touching bow-men, I perswade my selfe 500 musketers are more servicable than 1500 bowmen . . . My reasons are thus: among 5000 bowmen you shall not finde 1000 good archers, I meane to shoot strong shootes; let them be in the field 3 to 4 monthes, hardlie finde of 5000 scarce 500 able to make anie strong shootes. In defending or assailing anie trenches, lightly they must descover themselves to make fire shootes, where the other shot spoyle them by reason they discover nothing of themselves unless it be a little through small holes. Few or none doo anie great hurt 12 or 14 score off . . ."

He also points out that in the old days the enemy had only crossbows. ". . . where of none could compare with us for shot. But God forbid we should trie our bowes with their Muskets and Calivers without the like shot to answer them . . ."

In 1595, the Privy Council decreed that the bow should never again be issued as a weapon, and the hiss of the clothyard shaft and the deep twang of the string was heard no more on the battlefield. "Villainous Saltpetre" had won at last.

The bowman's victories are history, but what of the bowman himself? Most important, what made him the fighting man he was. There was little difference physically between an English peasant and those of any other country. He probably ate a little better than most, but beef and beer do not make a soldier. The answer lies partly in the weapon itself. An archer is not made overnight. It takes many years of training to handle a war bow in the manner of the English. More than training - it means a lifetime familiarity with it. Many readers of this book will remember Sir Arthur Conan Doyle's splendid Sir Nigel and The White Company. In the latter, one recalls the two little boys standing, "Each holding out a round stick in their left hands, as silent and still as two small statues." So little boys learned to keep a steady arm, and youths, "not to draw with strength of arms as divers other nations do, but with the strength of the body." This could only happen in a land where the peasantry was habitually in possession of arms, and, what's more, required by law to practice with them. (In the reign of Edward III, orders were issued that throughout the realm, men were to practice with the bow on Sundays and holidays, and to give point to the decree, all other sports were forbidden by law. In the same reign, laws were put into effect regulating the price of bows and arrows.)

This in turn leads to the great difference in the social structure of England and France. In the one there existed a numerous class of countrymen, newly risen above the grade of villein (who still plowed a strip of his lord's land, bound to it by lay, and paying in produce and service). These yeomen farmers and their sons - sturdy and self-reliant - were the source of the steady stream of bowmen and men-at-arms who followed their local lords to the wars. For though the heel of the Norman had borne hard on the Saxon neck for many years, by the fourteenth century the stubborn independence of the Anglo-Saxon and Anglo-Danish had begun to reassert itself, while the hot Norman blood of the conquerors had, in some measure, been cooled by transfusions of the native ichor. The middle and lower classes in England were by no means free, as we understand the word, and our conception of liberty, justice, and democracy were things undreamed of. But by the standards of his world, the English yeoman was a free man and he set great store by it. Any infringement of his rights, such as they were, and an angry rumble arose from village and town.

But while the exactions of a harsh lord might fetch men out with bow and bill, the normal relations between the yeoman class and the local gentry and their sons was on a more casual basis than other Iands. Equality there was not, but there was, in many cases, mutual respect. Where the French nobility always showed the utmost contempt for their foot soldiers, even to the extent of riding over them, if they got in their way, the English belted earl or baron thought nothing of dismounting and fighting alongside their archers on foot.

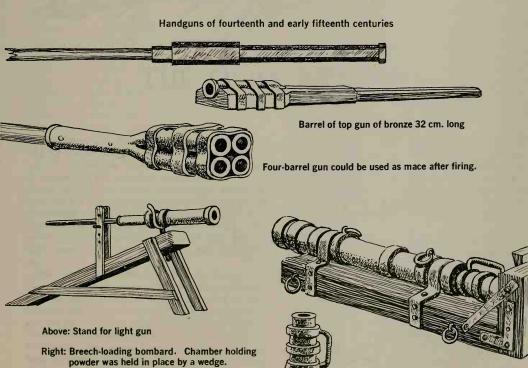
In France, on the other hand, the fendal system had taken firm root. The lot of the villein was unbelievably hard, and occasional frantic and bloody uprisings, such as that of the Jacquerie, clamped even tighter the mailed grip of their masters. A peasantry, half-starved, perpetually repressed, intimidated, and fleeced of every available penny or ounce of produce by a ferocious system of taxation and manorial rights, is hardly going to produce a bowman like Samkin Aylward.

So much for our archer's background. As for his equipment, so far as we know the bow remained unchanged. The wood of the stave varied (as time went on yew became scarce in England) and bowyers were ordered to make four bows of wych-hazel, ash, or elm for every one of yew. In Richard III's

time, for every ton of certain goods imported, ten yew bows were to be imported also. But the weapon itself was as perfect as the technology of the time could make it.

The archer presumably carried his shafts in a quiver, although there are many references to arrows being thrust through the belt. Also at his belt he would have worn a pouch containing spare arrowheads and bowstring, wax, and other archer's gear.

The amount of armor worn varied with the affluence of the lord in whose company he served, and with the archer's fortune on the battlefield. Illustrations in old books and scrolls often show archers of the fifteenth century in fairly complete body armor—salade, or barbute, mail hauberk, and breastplate—all probably the gleanings from some stricken field. Instead of the mail hauberk, many archers wore a jack. This was a double garment of cloth or leather, with plates of metal or heavy quilting sandwiched in between the material and held in place by lacing, riveting, or some other means. Over this the archer



usually wore a surcoat bearing the badge of the ord who hired him.

The legs were usually unarmored, the archer wearing the woolen hose and leather footgear of the period. At the belt was slung sword or axe and the nevitable dagger, which was weapon, hunting knife, ool, and eating utensil, and without which no man of the Middle Ages was dressed for the day. Beside he sword, many archers carried the maul.

A leather brassard, or arm guard, to protect the eft arm from the whip of the string completed the archer's equipment.

A good soldier, by our modern standards, the Enlish archer was not. He was but passably disciplined, and much given to drunkenness, looting, profanity (Goddams, Joan called them), and all the other vices of the military man of his day. But if he was brutal and greedy (and he won an evil reputation among the French during one hundred long years of war and bloodshed) he was pugnacious, brave, hardy, full of pride in his island race and in his mastery of his weapon, and with a fair share of that coolness and refusal to admit defeat that has characterized the Anglo-Saxon soldier from that day to this. Add, to this the fact that he had a virtual monopoly of the deadliest weapon then invented, and it is easy to see why the English bowman was so dreaded by his enemies.



THE SWISS PIKEMEN

HEN the fourteenth century began, the mailed horseman dominated the battefields of Western Europe. For centuries the man on horseback, the upholder of chivalry and of the feudal system, had ridden unchallenged across the land. But the ensuing years were to see the appearance in the field of two forces, diametrically opposed in armament and tactics, which were to change the whole accepted practice of medieval war, and do much toward toppling the outworn social system into ruin.

The impact of battles like Laupen (1339) and Crécy (1346) did more to unseat the iron-clad knight from his position of power than did the use of gunpowder. The grimy cannoneer would have his day, but the laurels of the 1300s belong on the brows of sturdy Swiss mountaineers and the English yeomen. Both made their names feared (and detested) and both profoundly influenced the tactics and strategy of their day. Exponents of shock on one hand, and

of missile power on the other, they never met in battle. Had they done so, the encounter might have resolved a question which has intrigued military historians for years. The fray (it would have proved a bloody and stubborn one) would also have delighted their enemies, who would have liked nothing better than to have such dangerous opponents exterminate each other.

The Swiss occupied a unique place in medieval Europe. Secure in their mountain valleys, they had successfully defied their feudal overlords, and as early as 1291 had formed a league for self-defense against all oppressors—meaning specifically the House of Hapsburg, who laid claim to those parts. With the sturdy independence characteristic of those who dwell in high—and inaccessible—places, they asserted their rights so aggressively that Duke Leopold of Austria, who purported to be their liege lord, gathered a considerable force to chastise them.

Leopold's route led through the pass of Morgarten,

a narrow defile with a steep slope on one hand, and the cold waters of Lake Egeri on the other. The little army was in the usual feudal order—or disorder - with the knights in front, as was fitting and proper, and the foot soldiers slogging along behind. Shaggy mountaineers being beneath contempt, there were no scouts or advance guard.

The presence of 1500 Swiss was announced by a rain of boulders and logs which crashed and rumbled down the slope into the startled Austrians. Into the struggling disorganized column charged the main body of the Swiss, plying halberds, clubs, and morning stars. The knights in the van, jammed together with no room to charge, died where they were. The center and rear, unable to press forward, and equally unable to stand the hail of rocks and tree trunks, finally forced their horses around and fled down the icy road. The survivors, many of whom were pushed off the road to perish in the icy water - crashed into and through their bewildered footmen, the Swiss in pursuit. The rout turned into a butchery:

". . . for the mountain folk slew them like sheep in the shambles: no one gave any quarter, but they cut down all, without distinction until there were none left to kill."

With this promising beginning can be said to date the dawn of Swiss freedom.

The slaughter of Morgarten was due as much to the Duke's carelessness as anything else, coupled with a terrain decidedly unfit for cavalry. Laupen (1339), however, was fought on open ground. Here, for the first time, the Swiss used the three dense columns which was to become their favorite battle formation. And here, too, was shown again, for almost the first time since Macedonian days, the great impact of a massed array of disciplined spearmen. For although the men of some districts preferred the halberd, the national weapon was the pike - a weapon some nineteen feet long. It was held shoulder high, arms apart, and point directed slightly downward. The heads of the pikes of the second, third, and fourth ranks also projected in front of the first line. The rear rank men held their pikes upright. The formations were very deep and compact, and relied on perfect steadiness, discipline, and rigorous training, for their cohesion and maneuverability.

Their success was due to these last two factors long absent from any European battlefield. The art of war in the West was about where it had been in the Persia of Alexander's day, and the impact of the phalanx was the same in both cases. The average medieval soldier was as much confused by the sight of the dense and well-ordered mass of Swiss pikes advancing swiftly to the attack as had been the native levies of Darius.

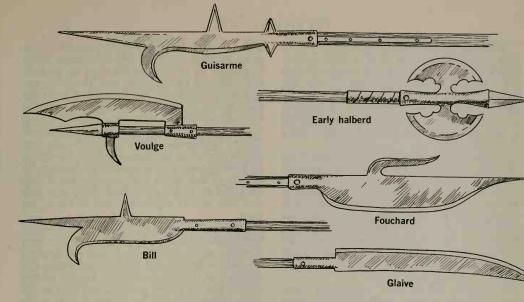
At Sempach (1386) part of the Austrian force chose to fight dismounted, while the two other battles remained mounted in reserve. The Swiss vanguard came into action first, and a struggle began in which the heavily armored knights and men-at-arms had the advantage. The arrival of the remaining Swiss turned the tide. Duke Leopold III dismounted his second division but before it could come up, the Swiss broke through the Austrian first line and smashed into the second (it was here that von Winkelreid is said to have gathered a number of the Austrian spears to his own breast-falling pierced through and through, but opening a gap in the enemy ranks). The third Austrian Division, thinking the day was lost, rode off the field. Leopold and his men were surrounded and slain almost to a man.

So ended a battle famous in Swiss history - not so much for the numbers involved (the Austrian force numbered some 6000, while the Swiss had 1500 or 1600), but because it marked the end of Austrian attempts on their independence.

The halberd was a favorite weapon and numbers of halberdiers were always included in any Swiss array. It was some eight feet long, with a head like a wide-bladed axe, a long spike on top and some kind of nastiness - a curved blade, or hook, or another spike, at the back. There were several weapons of this type: bills, guisarmes, and voulges - some with blades almost thirty inches long. Wielded by brawny arms, they were terrible instruments of destruction, and could shear through armor, flesh, and bone as through cheese. Besides the bearers of these, there were those who preferred the two-handed swords, or the morning star-a heavy cudgel liberally studded with long spikes.

The men armed with these weapons were stationed behind the pikes, and if the onward surge of the phalanx was checked, they moved forward between the files to the front rank.

The Swiss also made considerable use of light troops armed with missile weapons. In the early days, these were crossbows, but by the time of Grandson and Morat (1476), the use of firearms was common. At that period these were crude and unhandy weapons, with a very slow rate of fire, but even at that time were proving their worth, and it must be remembered that the crossbow was also clumsy and slow to load. These troops were usually deployed as skirmishers in front of the advancing pikes. Before the lines joined, they retired between the files to the rear of



Some polearms of the fourteenth and fifteenth centuries

the formation. The proportion of light troops to the rest of the armies varied—at Morat they numbered 10,000 out of 35,000, although this seems to have been exceptional.

How much the Swiss tactics were a product of their situation and society is hard to tell. Certainly they were originally a poor people, unable to bear the expense of complete armor, and fancy equipment. This poverty proved a blessing, for, as they soon discovered, they could outmarch and outmaneuver their more heavily armored opponents. The great majority of the Swiss wore only a cloth cap, or hat, and a leather jerkin. Those who wore a steel cap and breastplate were stationed in the front rank. The leaders wore full armor and so were mounted until the action commenced, when they dismounted and led their men on foot. This mobility was one of the Swiss' chief assets, and the compactness of their formations, in contrast to the usually straggling, sprawling medieval "battle," allowed them to bring overwhelming force to bear at a given point.

Their battle formation was taken up on breaking camp, and they proceeded to the scene of action ready to enter battle at any moment. This appearance on the field of units already formed and in motion for the attack often proved disastrous to the opposing commanders, who needed a great deal of time and patience to coax and bully the usual con-

glomeration of over-eager gentry and reluctant peasantry into some sort of battle array.

Not only were the Swiss mobile, but the similarity of their equipment gave them a tactical unity lacking in the typical army of the period. They had little or no cavalry or artillery train and no mass of half-armed footmen, who impeded the movements (and often reduced the actual fighting effectiveness) of the majority of feudal arrays.

Their mobilization was also rapid, and was reminiscent of the great days of Greece and the early Roman republic. There was no need for the ponderous machinery required to raise a feudal army to be set in motion. In time of emergency each man knew his mustering place, and proceeded there at once. There the units were formed, officers elected or appointed, and the whole force set in readiness to move against the enemy.

Their tactics were simple. Their aim was to throw an overwhelming mass of pikes at the enemy—advancing rapidly, but steadily—always forcing the fight and never allowing themselves to be attacked. In this way, they took advantage of their own superior mobility and discipline, reduced as much as possible the time during which they might be exposed to the missile weapons of the enemy, and gave momentum to the shock of their attack. Oman writes in his *Art of War*:

"The rapidity of the Swiss advance had in it somening portentous; the great wood of pikes and halerds came rolling over the brow of some neighboring ill; a moment later it was pursuing its even way oward the front, and then—almost before the oponent had time to realize his position—it was upon, im, with its four rows of spear points projecting in front and the impetus of file upon file surging p from the rear."

The Swiss usually went into battle in three corps. he division that had led the approach marched raight at the point in the enemy line selected for ttack. The following division advanced parallel to he van, but a little to its rear, where it could act as reserve and bring its weight to bear wherever eeded. This advance in echelon of divisions had he advantage of preventing an inward wheel of the hemy to attack the van in flank. Any such attempt rould expose them to a flank attack in turn, by the ivisions advancing in the rear.

These tactics had the added advantage of allowing an open space in the rear of the attacking columns which they might retire if repulsed, without danger of throwing troops behind them into confusion—a common occurrence in many medieval battles.

In the three-division formation, it was also simple refuse one or both wings, or the center. At times ne normal three-division formation was varied. On t least one occasion, the Swiss moved in one large ollow square. When surrounded by cavalry, or by verwhelming numbers a "hedgehog" of pikes was ormed. Such was the case at the fight at Saint Jacob n the Birs (1444). This battle also illustrates the engths to which troops will go when convinced of neir own superiority. A force of less than a thousand wiss deliberately attacked an army of nearly fifteen nousand Armagnac mercenaries invading the Conederacy. They broke the enemy's center and then, urrounded by great numbers of horsemen, they ormed their ring of pikes. Though repeatedly harged by mounted men-at-arms, and under contant attack by crossbowmen and light troops, they naintained their position until nightfall, amid heaps f their own dead, ringed about with some two housand Armagnac corpses.

This belief in their own invincibility was one of the factors which made them the most noted fighters of their age. And as the legend of this invincibility pread, it naturally had the effect of reducing the norale of their enemies. "God is on the side of the Confederacy," went the proverb—and what soldier in his right mind would contest the will of God? If uch a thing were possible, their own morale was

almost too high, tempting them into impossible situations, in which they could only suffer severe loss to no purpose. An example was the attack on the fortified position of La Bicocca in 1522. There they successfully crossed many obstacles under a heavy fire from Spanish musketeers and harquebus men. The last, and main position, was a deep ditch and a steep slope, at the top of which were ranged ranks of German Landsknechts. Those of the Swiss who were able to clamber up the slope were thrust through by the German pikes. The troops of the Confederacy did not give up their attacks until three thousand of their dead filled the bottom of the ditch — but it is of such stuff that military reputations, and traditions, are made.

Which leads to one of the weaknesses of the Swiss Confederation. On a tactical level the officers were excellent, and in view of the straight-ahead-and-at-'em style of fighting, and the large and simple formations it could hardly be otherwise. Any cool veteran with an eye for ground and the weak spots of the opposing line could lead his division of pikes at the enemy array. But of grand strategy there was little or none. For one thing, there was seldom a Swiss commander-in-chief. Rather, the conduct of the war was managed by a council composed of the captains of the forces from each canton. Questions of policy or strategy were threshed out, and decided by a majority vote. Strange to say, in most cases, this system served very well, perhaps because all involved were usually only too eager to fight, and the only questions were the quickest and most effective way of doing so.

Against the usual feudal armies, the straightforward attack methods worked successfully. Great generalship was not needed to order direct assaults.

The reputations of the Swiss troops for courageous assault and obstinate resistance spread rapidly during the fourteenth and fifteenth centuries. The peak was probably reached during the Burgundian War. The choleric Charles the Bold (or Charles the Rash) Duke of Burgundy, incensed at what he considered an infringement of his territorial rights by the small, but ever-growing, Confederacy, began the war by reoccupying the little town and castle of Grandson, and hanging its garrison of Bernese. The other cantons of the Confederacy came to the aid of the Bernese, too late to save the garrison, but vowing to avenge it.

The Burgundian army, said to have been thirty or forty thousand strong, composed in part of a hodgepodge of mercenaries from half a dozen countries, was drawn up in good order on the plain between the hills and the lake of Neuchâtel. The Swiss generalship was poor. The vanguard crested the hills far in advance of the other two columns, and on reaching the plain was attacked by the Burgundian cavalry. The first attack failed, although its leader managed to spur his horse into the Swiss array, and was hacked down by the halberdiers stationed around one of the standards.

The Duke then led on the picked lanees of his own guard, reckoned the best in Europe. But the bravest troops, clad in the finest armor, could make no impression on the dense array of pikes. Charge after charge, led by the Duke in person, was beaten back, and the Swiss, far from breaking, began to advance.

The Duke now decided to retire his center, and, when the Swiss division was engaged, to envelop it with both wings and attack it in flank. What the results of this classic maneuver might have been, we will never know, for while the retirement was taking place, the other two Swiss divisions swept majestically over the hill and moved rapidly to the attack. They signaled their advance, we are told, by blasts on two huge war horns, the "Buli of Uri" and the "Cow of Unterwalden."

The Burgundian infantry, dismayed at the retreat of their center, as well as the inexorable approach of the great walls of pikes, broke and fled in panic, abandoning their camp with all its spoil to the victorious Confederates.

Commynes says that a Swiss told the Duke before his campaign:

"That against them he could gain nothing, for their country was very barren and poor; that there were no good prisoners to make, and that the spurs and the horse's bits in his own army were worth more money than all the people of their territory could pay in ransom even if they were taken."

If this is true, the tables were now turned, for the loot of the Burgundian camp was immense—the Duke having left behind his artillery, pay chests, jewels, even his Collar of the Golden Fleece. The poor Swiss knew not what to make of all this wealth. "They sold the silver plate for a few pence, thinking it pewter." The man who found the Duke's great diamond in a pearl encrusted box is said to have thrown away the diamond, "for a piece of glass," and kept the box.

This costly defeat seemed only to further enrage the good Duke, who spent the next two months regrouping his forces at Lausanne. In spite of advice from his old enemy, Louis XI of France (who knew very well the rash Duke was incapable of heeding it)

"to return home and bide there quietly, rather than go on stubbornly warring with yon folk of the Alps, so poor that there was nought to gain by taking their lands, but valiant and obstinate in battle." In June he advanced his banner once more, with the object of attacking Berne. Advancing on that town by the way of Morat, he besieged the place. The Confederates rallied to the rescue once more, and advanced to attack the besieging army. The Duke, who should have known better, had no light troops out, so that the Swiss were able to approach unheralded and mass opposite the Duke's right. After keeping his Burgundians in line of battle for some six hours in a driving rain, the Duke ordered them back into camp, leaving a few thousand to hold an entrenched line. The vanguard of the Confederates now advanced, took the palisade and drove the garrison headlong down the slope, the Swiss at their heels. Here they fell foul of the troops rushing to their support and there was great slaughter among the confused masses, some trying to flee and others to press forward to the attack. The cavalry tried to stem the tide but the assault of the Burgundian men-at-arms on the pikewall met with no more success than at Grandson. The fight soon developed into a rout, with the Swiss van and the main division pursuing the fugitives. Meanwhile the third division attacked the Italian allies of the Duke and drove them into the lake, few escaping out of six thousand.

Morat was a hard fought battle. Losses on both sides were heavy. Among the Duke's troops were some English archers. It is possible the rain had softened their bowstrings—there is no report of their accomplishing anything. Contrary to usual practice, the Swiss had a small force of cavalry (Bernese patricians, and probably not more than one hundred of them) at the battle, who presumably took part in the pursuit of the routed troops. This pursuit, and the ensuing butchery, was carried on with great ferocity, giving rise to a common saying "as cruel as Morat."

The fortunes of the Duke were now at a low ebb. René of Lorraine, whom Charles had driven from his territory, regained his lands and in January 1477, a battle was fought between his troops, among which were many Swiss, and a small army under the now desperate Duke. Two of the Swiss columns held the Burgundians, while the third made a flank attack under cover of some woods. The result was inevitable. The Burgundians were utterly defeated and the Duke, fighting furiously to stem the rout, was slain by the smashing blow of a Swiss halberd.

The Dukedom of Burgundy had been a power in Europe. Its defeat raised the prestige of the Swiss righting man to great heights. The services of the soldiers of the Confederacy were sought by many, and no prince would think of starting a campaign without a contingent of the famous Swiss pikemen. The Germans paid them the compliment of imitating hem, and the Emperor Maximilian raised bodies of nen similarly armed—the Landsknechts. These-prossed pikes with the Confederates on many battle-lields, and the collisions of German and Swiss were particularly bloody.

Frequently the opposing front ranks went down almost to a man at the first impact. Nor was the laughter confined to the pikes, for when the long weapons and their wielders had finally become hopessly jammed together by the press of men from behind, the deadly weapons of the halberdiers were prought into play. The side which was finally forced to retire was, of course, badly mauled in the process. The Landsknechts are said to have lost over half their men after their combat with the Swiss at Notara (1513).

From a nation of poor peasants striving for freedom, he Swiss now became a race of mercenaries. The xport of the nation was men-at-arms - the import: old, concessions, ransoms, and loot. The cold-blooded erocity with which the Swiss slaughtered the inaders at Morat became the common practice after ny victory. The brutalizing effect of wars, fought on oreign soil, where robbery, rape, and murder was onsidered normal procedure on the part of the comnon soldier, had as its result the gradual breakdown f character and discipline. Besides renown, the Swiss equired the name for greed and even treachery. Point d'argent, point de Suisse" went the saying. By the beginning of the sixteenth century, the Swiss vere recognized as a great military power. Their deeat of Louis XII of France at Novara added to heir ambition and it is possible that the Duchy of Milan might have been added to the Swiss Conederacy, but at Marignano (1515), they were dealt severe defeat by Francis I. That battle, in which the wiss lost no part of their glory as stubborn and enacious fighters (they retired in good order after he two day battle, and inflicted almost as many easualties as they sustained), showed up a fatal weakness in their tactics. For while the art of war was dtering rapidly, the Swiss, in their pride and arogance, refused to adapt to the new conditions. The actics which had proved so successful against the plundering of feudal princes were now opposed to generalship of the first order, coupled with rapid improvements in artillery and small arms.

Against the proper combination of infantry, cavalry,



Pikeman-about 1515

and fire-power, the massed phalanx was at a disadvantage. One set method of fighting, employing the same weapons and formations year after year, could not compete against the skillful use of cannon, mounted men, and trained infantry, many of whom were armed and handled in exactly the same way as were the Swiss themselves. It was not the thirty cavalry charges that Francis and his men-at-arms made on the Swiss ranks that won Marignano, it was the fact that the Swiss could oppose only half-a-dozen cannon to the seventy-four of the French. In the face of ever increasing fire-power, the frontal assault, without adequate artillery support, was doomed to failure. If cavalry could be used, as it was at Marignano, to check the phalanx and make it form the hedgehog, while cannon and arquebus thinned its ranks, then the great mass of pikes were all but helpless.

A further blow to Swiss supremacy on the field was dealt by the Spaniards. Their agile sword-and-buckler men darted under the pikes and came to close quarters—just as the Roman legionaries had done against the phalanx of Pyrrhus. At close quarters,

the shorter weapon must always have the advantage. The wielder of the pike must drop his weapon and draw his sword. He was then at a disadvantage against a man not only with a shield, but armored with helmet, breast and backplates, and greaves.

It was for the above reasons, and not because of any deterioration of the individual soldier, that the Swiss lost that pre-eminence which they had won as the finest foot soldiers of their time. Their only fault was that they watched their times change but refused to change with them. For steadiness, courage, and discipline they had seldom been equaled. It may be true that the man in the ranks who flinched under cannon fire was automatically sentenced to

death. If so, the penalty may have served as a grim reminder to some newly joined recruit, but it is to be doubted if the veterans who swept away the Burgundian cavalry at Grandson, or advanced in the face of cannou and musketry at Marignano, had any thought in mind but to close with the enemy.

They were spurred on by no great religious fervor, nor, at least in later years, did patriotism enter into their feelings. Yet men did not do all that they did for money; and, besides a full purse, it was pride of organization, glory in past achievements, and comradeship of the ranks which made them march so steadily under their company banners in both defeat and victory.



THE SPANIARDS

THE Iberian peninsula is a land of sharp contrasts. A hard and rugged land, much of it; and like many other such areas it produced a hard and rugged breed. The Spaniard has long been famous for his fighting qualities, qualities to which Celt, Phoenician, Greek, Carthaginian, Roman, Visigoth, and Moor have all contributed. Sturdy Spanish mercenaries swelled the ranks of the Roman armies and the famous Spanish short sword was adopted by the legions.

Centuries of struggle against the Moslem invaders of the peninsula were followed by a history of feudal wars and rebellions, frequent and savage even by medieval standards. To quote historian William H. Prescott:

"The numerous petty states, which rose from the ruin of the ancient [Visigothic] monarchy, seemed to regard each other with a fiercer hatred than that with which they viewed the enemies of their faith. . . . More Christian blood was wasted in these national feuds, than in all their encounters with the infidel."

Even so, the struggle to win back the land from the Moslems took on the aspects of a crusade, and to the martial spirit of a warlike people was added a religious fervor which later deepened into burning fanaticism.

The end of the fifteenth century saw the final uniting of the peninsula under the banners of Castile and Aragon and the conquest of the last Moorish foothold in Spain. The fall of Grenada coincided with the successful voyage of Columbus. These events sparked a sudden explosion of Spanish energy. Within ten years troops under the celebrated Gonzalo de Córdoba, "El Gran Capitán," were battling the French in Italy; and the first of the conquistadores were laying the foundations of the great Spanish Empire in the New World.

The conditions were ripe for military glory. A yeomanry, skilled in the use of weapons and inured to hardship, and a numerous class of lesser nobility, poor but proud, thirsting for fame and fortune, and led by captains proved in battle, provided the raw material. Coupled with this was an intense national pride, religious enthusiasm, and a belief in the invincibility of Spanish arms; all governed and welded together by an iron discipline. St. James of Santiago was their patron saint and the cry of "Santiago, y a ellos!" (Santiago, and at 'em) was heard on many a hard-fought field from the shores of the Pacific to the plains of northern Flanders.

They were hard men, these Spaniards, with a reputation for cruelty and avariee, as well as ferocity—oblivious to the suffering of others as to their own. "We slept near a stream," wrote Bernal Diaz in his Discovery and Conquest of Mexico. "And with the grease from a fat Indian whom we had killed and cut open, we dressed our wounds, for we had no oil . . ."

The savagery of their treatment of the unfortunate inhabitants of the Netherlands was notable even in that rough age, and the threat of the horrors of a Spanish sack caused many a town to open its gates. Small wonder that time and again handfuls of such men defeated armies of natives numbering thousands; or that on the battlefields of Italy and the Low Countries the mere presence in the field of the dreaded Spanish infantry was often enough to ensure victory.

The American historian John L. Motley wrote: "For whatever may be said of their cruelty and licentiousness, it cannot be disputed that their prowess was worthy of their renown. Romantic valor, unflinehing fortitude, consummate skill characterized them always."

The ferocity of their behavior to the conquered was equaled by the harshness of their own discipline. Hangings were frequent, and the Duke of Alva had no compunction about beheading the captains and colonels of the Tercio of Sardinia, which had been engaged in an action ending in an ignominious defeat at the hands of the Flemish patriots.

The organization of all medieval armies changed during the sixteenth century. With military affairs becoming more of a science, the loose groupings of bands of retainers of all arms under the leadership of their feudal lords was replaced by more precisely organized and easily controllable units of professional soldiers. This reorganization was also part of the move by the rulers of the great monarchies to consolidate power into their own hands. Royal troops, raised and paid by the crown, began to take the place of the private armies of the great nobles.

In Spain, a permanent force was organized in 1496 to guard the French frontier. This force, called the Infantry of the Ordinance, consisted of three bodies, one armed with the pike, another with sword and

buckler, and another with crossbow and arquebus. The companies forming this infantry force were at first very small—about one hundred men—but later these companies, or banderas, were made stronger. Frequently these banderas were combined in units called coronelias, a word possibly derived from the Italian colonello or little column. In 1534 a new type of unit was formed, the tercio, roughly coinciding with the modern regiment. The tercio was made up of three coronelias, each of four banderas of 250 men. The leader of each of the coronelias was called a coronel. The whole tercio was under a Maestro de campo and his second in command was designated a Sergento mayor.

As with most military commands, the numbers occasionally varied. Some *tercios* had more companies than others and as time went on the proportion of arquebusiers to pikemen and swordsmen increased. However, the *tercio* always remained a unit which included all infantry arms, was small enough to be flexible, and large enough for independent action.

A reflection of the changing times could be seen in the fact that it was no longer considered beneath the dignity of a gentleman to fight as a foot soldier. The military professionalism of the period had its own pride of craft, and a veteran soldier, even if never rising from the ranks, was a man of some standing. "I am a gentleman of a company," says Shakespeare's Henry V, and Pistol asks him, "Trails't thou the puissant pike?" A far cry from the days when the chivalry would ride down their own foot in order to get at the enemy more quickly.

As we have seen in the case of the Swiss pikemen, changing times, weapons, and customs produced drastic revision in the medieval concept of warfare. But where the conservative Swiss were content to retain their masses unchanged, the Spaniards were quick to note the drawbacks inherent in such comparatively unwieldy formations. When opposed to troops trained to the use of sword and shield, properly supported by pikes and missile weapons, a mass of men armed solely with the pike was at a serious disadvantage.

Shock—as represented by the onslaught of the massed pikes—was opposed to shock plus fire-power. Later, the Swiss added arquebus-men to their array but never to the same extent as the Spaniards. It is mainly to this continued reliance on the pike, and neglect of missile weapons that the decline of the mountain troops can be attributed. At Pavia (1525), for instance, although the brunt of the fighting fell on the German pikemen of both armies—Frundsberg's landskrechts against the "Black Band" in French pay—the battle was in part won by the steady fire of the

Spanish arquebusiers under the able Marquis of Pescara. Mixed as was their armament, they were used with great skill. The battle may be said to have been the first where small-arms fire had a decided effect on the outcome, and thus marks a turning-point in the history of warfare.

In this effective combination of weapons, which called for a high degree of training and discipline, the Spanish excelled. Opposed to a dense hedge of pikes, the Spanish would first gall the phalanx with fire from arquebus and crossbow. At the moment of contact, when the front ranks of pikemen were in collision, sword and buckler men attempted to slip under or between the enemy pikes and break up their formation. Their efforts would be aided where possible by the Spanish pikemen crossing pikes and bearing up or down on the opposing weapons, thus giving their swordsmen the needed opening for attack. An attack of this kind could pose a serious threat to a mass of men armed with the long pike alone. Once the nimble sword and buckler man was past the point of the long pike his opponent had to rely for protection on the points of his fellow pikemen or halberdiers in the rear ranks.

Although it is doubtful if any sixteenth century soldier could match the Roman legionary in discipline or training, the parallel between the Spanish tactics and the attack of the legions on the army of Pyrrhus, when short stabbing sword contended against twentyone foot sarissa, is clear.

Because the effective use, and even security, of each arm depended on the close support of the others, the formations developed by the Spaniards and later almost universally adopted were necessarily very complicated both to draw up and to maneuver. The tactician of a later day, who had only to consider the arranging of units of similarly armed infantry and cavalry, had an easy task compared with the sergeant major general of the sixteenth and early seventeenth centuries. His infantry consisted of armored pikemen, unarmored pikemen, halberdiers, swordsmen, arquebusiers, and musketeers: while there would usually be at least two classes of cavalry; heavily armed and armored men-at-arms and light horse. To bring this conglomeration from column of march into battle formation was no mean feat.

When arrayed for combat, the pikemen (armored ones in the front ranks) supported by sword and buckler men and halberdiers, formed a mass or "battle" usually longer than it was deep. Sometimes this formation was hollow, more often it was solid. The "shotte," the arquebusiers and musketeers, were sometimes formed in squares at the four corners of the

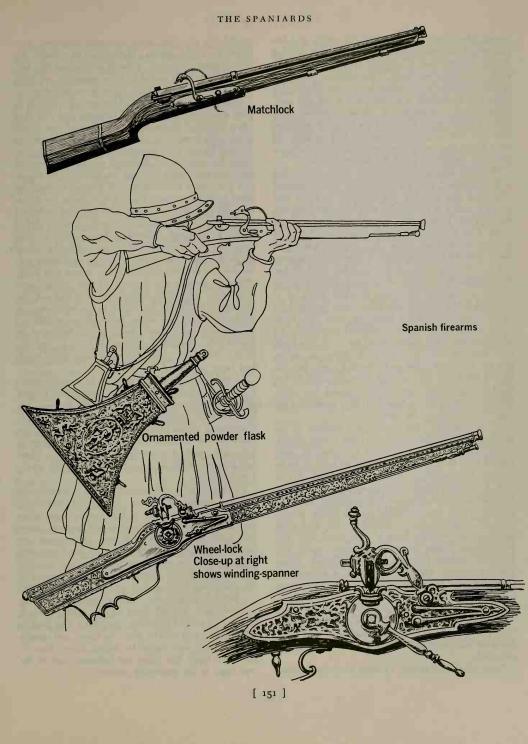
"battle" and more arquebus and/or crossbowmen might be distributed along the front and flanks of the formation. They also served as skirmishers. The whole unit took on much the shape of a small fortress, the squares of "shotte" being the bastions. At other times the arquebusiers were drawn up in "sleeves" on either flank, usually narrower in front than they were deep. This formation enabled a continuous fire to be maintained to the front—each rank discharging their pieces and then retiring between the files to reload. It also provided for fire to either side if the formation were taken in flank.

This human fort was supported by others similarly ordered, and much care had to be exercised so as to ensure that they were near enough to offer mutual support without getting in each other's way. Things were further complicated by the fact that at times each "battle" was flanked by men-at-arms (armored or partially armored men on large mounts) and light horse. The heavy cavalry, toward the end of the century, were generally armed with one or more pistols. Like the arquebusiers, they also filed to the rear after firing. At first this pistolle was only a short arquebus, fired by a match, but later the wheel-lock was adopted, which, though far more complicated and expensive than the matchlock, was considerably more practicable for use on horseback. The light horse, at least in the Spanish service, were usually armed with a medium-length lance. This was a favorite weapon, adopted from the Moors.

Besides being difficult to form, these complex arrays were exceedingly brittle. Once disorganized, they were almost impossible to rally and reform. A shattered "battle" usually disintegrated, often carrying any formation stationed immediately in rear of it along in the rout.

During this period the arquebus gradually replaced the crossbow altogether, and a new weapon, the musket, made its appearance. This piece, heavier and of longer range and with greater penetration than the arquebus, was fired from a rest. Eventually the musket replaced the arquebus altogether, but at the time of which we write it was an auxiliary weapon, a few being included in each company.

The crossbow with which many Spaniards were armed at the beginning of the century was similar to that which had been in use for many years. The sixteenth century bow was of steel, set on the end of a wooden stock somewhat similar to a modern gun stock. The draw was very short—only a few inches—and the weapon relied for its force on the extremely heavy "pull"—over 700 pounds in many cases. Such a bow had, of course, to be cocked by mechanical



means. The "goat's foot" lever of the earlier and less powerful bows was unequal to the task of cocking such a monster and a windlass arrangement with a series of pulleys was used. This windlass was hung at the arbalestier's belt when not in use. Sometimes, instead of a windlass, a device using a cog and rack, called a cric, was employed. These crossbows were, without doubt, more accurate than the early arquebus and were not so much affected by bad weather. At short range they could often send the heavy bolts, or quarrels, through any but the heaviest plate.

The early arquebus, on the other hand, was such a clumsy weapon, with its match that forever needed relighting and priming pan exposed to wind and weather, that it is remarkable that it should have survived at all. It was slow to load and tricky to fire under even the most favorable conditions. The poor powder of the time fouled the ill-made barrels so badly that the ball was either deformed by the ramrod or was cast much smaller than the bore. Either would result in great loss of accuracy. While possibly having a range of some two hundred yards, it is doubtful if the average arquebus could be relied on to hit even a man-sized target at more than forty yards. If the mark was an unshielded shoulder or an unvisored face, the range would be more like forty feet. The ball was heavy, though, about an ounce, and the flash and noise probably had much psychological effect. At any rate, the arquebus and its big brother, the musket, not only supplanted the crossbow but even in Alva's time (c. 1560) accounted for half the strength of the tercio.

As compared to later periods, the artillery of the time was heavy and unmaneuverable. Siege pieces, which were laboriously dragged by teams of oxen, ranged from the Culverin, with shot of from 15 to 20 pounds, and weighing in the neighborhood of two tons, to the 32-pounder Demi-cannon and the fourton Cannon-Royal firing a ball weighing some 70 pounds. There was a sizable list of lighter pieces, some of which were breechloaders. We find such names as Serpentine-firing a half-pound ball; the two-pounder Falcon and its one-pounder cousin, the Falconet; Sakers; Culverin-Bastards; Demi-Culverin and the Basilisk. Probably the Saker, a six-pounder weighing some 1400 pounds was about as heavy as could be readily dragged into action by a horse team. Carriages were crude and cumbersome and limbers were unknown. Once posted, even the lighter guns were pretty much of a fixture - unable to keep up if the army advanced and almost sure to be taken if it retreated.

There were also several varieties of multi-barreled

small-bore weapons, some on carts furnished with spikes or scythe blades. These *char de cannon*, *Ribcaudequins* or "organs," some of which fired fifty barrels at once, were useful at close range for repelling a charge, but were of little value in an advance.

Strangely enough, the art of the armorer reached its peak after the introduction of firearms, and at a time when it seemed probable that powder and shot would make such protection obsolete. But though already doomed by the new weapons, the use of armor persisted for many years. Although the arquebusier and the cannoneer were playing an increasingly important part, most battles were still decided by hand-tohand encounter, where armor might mean the difference between life and death. Also a cuirass or helmet of the finest steel could deflect even a musket shot if struck at an angle, although if hit squarely at close range the ball would probably penetrate. The rest of the body armor, being much thinner, was more vulnerable. As firearms improved, the breast and backplates (especially the former) of the cuirass were made very thick. The breastplate of a half-suit belonging to Philip III (c. 1600) is ten millimeters in thickness. There are seven indentations in this extraordinarily heavy piece, made by the bullets of an arquebus or musket (presumably fired to test the plate). The back piece, however, only 3-mm thick, had been perforated.

As the pieces guarding the vitals were made heavier, the increased weight made it impossible to give adequate all-round protection. Soon the defenses below the waist vanished entirely or were reduced to overlapping plates (tassets or cuisses) protecting the lower part of the trunk and the front of the thighs (a vulnerable part of a mounted man's body). These half-suits remained in use until the end of the seventeenth century.

The infantry, by mid-sixteenth century, for the most part had abandoned all armor but cuirass and helmet. The helmet was usually of the morion type, often with a high comb. This morion has become associated with Spain although it was in common use throughout Europe. Another favorite headpiece was the burgonet. The sword was fairly long and straight. It was still a heavy cutting weapon, but the use of the point was beginning to come into fashion. The two-handed sword was still sometimes used by mounted men, carried slung at the saddle bow. A dagger was part of everyday equipment. The buckler of the sword and buckler men was round and usually small. It was used more to deflect blows than to shield the body. The pikes and halberds were of the type used in the preceding century.

Rigid as was the discipline necessary for the formalized style of sixteenth-century warfare, there was nothing inflexible about the military thinking of the Spanish soldier. He might be stiff, formal, proud, uncompromising, and with an awe-inspiring singleness of purpose; yet faced with a new or unusual situation he often reacted with the mental agility of a modern commando. Accounts of the conquest of the New World are full of instances of the versatility of the invaders—of bridges of ropes and vines thrown across raging torrents, and fleets of little boats built, often fastened with nails painstakingly fashioned from spare horse shoes.

The long years of siege warfare in the Lowlands tested the ingenuity of the most experienced captains of the age. While admittedly out of their element on the sea, nevertheless the Spanish readily adapted to the amphibious warfare waged by the ship-minded Hollanders and more than once beat them at their

own game.

One winter an attack was made on some Dutch ships frozen in the ice near Amsterdam. It was repulsed by Hollanders on skates, in a slippery and bloody little battle. Said Alva: "Twas a thing never heard of before today, to see a body of arquebusiers thus skirmish upon a frozen sea." The ships were uncaptured, but a lesson was learned.

Quoting Motley again: "The Spaniards could never be dismayed, and were always apt scholars, even if an enemy were the teacher. Alva immediately ordered seven thousand pair of skates, and his soldiers soon learned to perform military evolution with these new accounterments as audaciously, if not as adroitly as the Hollanders."

The Spanish soldiery could storm walls under showers of bullets, stones, unslaked lime, molten lead, flaming hoops, and whatever else desperate townsfolk could lay hands on; or stand unflinching in the field while cannon and musketry played on their dense squares. They could also undertake an incredible march of almost ten miles, racing against a rising tide, across a narrow strip of land submerged even at low water to an average depth of four or five feet. This feat of the Spanish leader, Mondragon, was later equaled by a similar, even more difficult advance on which marchers had not only to contend with water up to their necks, but a fleet of small boats filled with Hollanders armed with arquebus, flails, boathooks, and even harpoons.

These were no ordinary troops who would dare these things, nor ordinary officers who led them. It is no surprise that veterans such as these could at times so paralyze the enemy that, as outside Namur, a few hundred could shatter an army of several thousand with the loss of ten or eleven of their own number. The Netherland forces were completely annihilated, some six or seven thousand perishing on the field or hanged as prisoners.

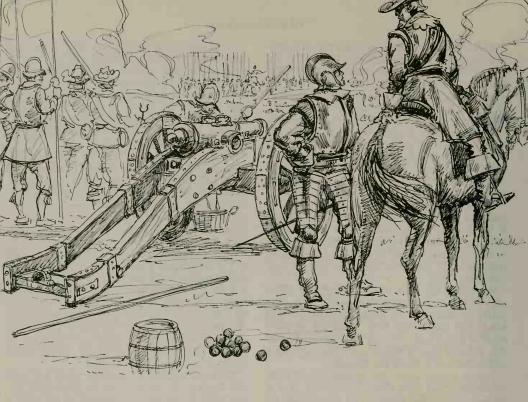
But the years went by—and the glory departed. The roll of Spanish drums and the measured tread of her footmen no longer sent thrills of apprehension through the opposing ranks. The fierce burst of vitality which sent the fame of Spanish arms flaring across the world died down, and the peninsula slumbered again, like an inactive volcano, still smoking and rumbling occasionally but no longer a menace.

Why? Perhaps religion had something to do with it. The Church laid a heavy hand on Spain in those days. Religious fervor had turned to blind fanaticism and bigotry, and the dark shadow of the Inquisition lay across the land. The inspiration of an Isabella had been replaced by the cold, calculating machinations of a Philip II. Original thinking and an adventurous spirit does not flourish in a police state and it may be that the rising generation of Spanish officers lacked the dash and élan of their fathers.

The formalism and conservatism which had crept over Spain by the beginning of the seventeenth century seems to have cast its reflection on her military machine. The fact that despite the vast amounts of precious metal imported from Spanish America, the almost incessant wars of the sixteenth and early seventeenth century had impoverished the land was undoubtedly a factor, but by itself is not sufficient to explain the decline of Spanish arms.

Certainly the man in the ranks was not to blame. He had lost none of his stubbornness and tenacity, as the last stand of the old Spanish tercios at Rocroi proved. For a century and a half he maintained his reputation as the finest foot soldier in the world. Almost three centuries later he was to prove again, in a bitter and bloody civil war, that he had lost none of the qualities of his ancestors.

Whatever the cause, the military initiative slipped away. Once lost, it was never to be regained. For with it had gone the most precious thing of all—the belief of the Spanish soldier that he was superior to any fighting man on earth.



THE SWEDES

s might be expected of a century which saw murderous fighting in almost every country in Europe, the seventeenth was replete with the names of illustrious soldiers. Maurice of Nassau, Tilly, Wallenstein, Turenne, Condé, and Vauban were all hailed at one time or another as masters of the art of war. Yet of all the great soldiers who rose to fame during that exceedingly bloody period in history, two stand out as having raised the men under their command to the highest rank among the world's fighting men. These leaders were Gustavus Adolphus and Oliver Cromwell. Their backgrounds were entirely different - one a monarch; the other a country squire (whose efforts were to cost his sovereign his head). Yet they had at least two things in common: faith in the shock power of cavalry and in the invincibility of disciplined, God-fearing men fighting in the cause of Protestantism.

The Lion of the North

The first of these, Gustavus Adolphus, the Lion of the North, was destined to play a major part in the terrible semi-religious struggle, the Thirty Years' War, which embroiled most of the West and left much of Germany a wilderness. "Better to rule over a desert than a country of heretics" was the motto of Ferdinand, the Holy Roman Emperor, while the Calvinist general Count Peter Ernst Mansfeld became known, with good reason, as the "Attila of Christendom." It was in this spirit that the war was waged, and the atrocities perpetrated by both sides repeated, on a larger scale, those of the worst of the Spanish massacres in the Low Countries.

The whys and wherefores of the Thirty Years' War

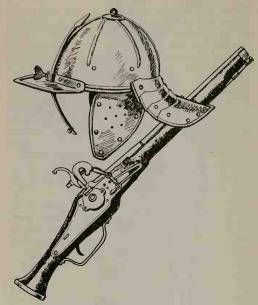
are too complex to go into here. Religion and international politics were inextricably mixed, and indeed, Gustavus' motives have been questioned. He is usually represented as the champion of Protestantism against the forces of Catholicism, but he was, first of all, a Swede-and deeply as he may have felt the religious problems which were tearing Europe apart, Swedish aspirations in the North were his main concern, and the securing of the Baltic as a Swedish lake was uppermost in his mind. Sweden in the early days of the seventeenth century included Finland, Esthonia, and Livonia. War with Russia secured Ingermanland and Karelia (the district around presentday Leningrad) in 1617, and a struggle with his cousin, Sigismund of Poland, yielded Courland and much of Polish Prussia (1629). It was generally agreed that he would be elected the King of Poland on the death of his cousin, which would have put him in a far way to becoming monarch of a mighty northern empire. However, spectacular as had been his successes in the North, his claim to fame lies in the brief two-year campaign in Germany. His victories changed the whole course of the war and established the Swedish armies as the first in Europe.

Granted that the tough Swedish peasantry made excellent soldier material, the secret of Gustavus' successes lay in the military reforms which he initiated, and the skillful way in which he translated his improvements into superior tactics.

At the close of the sixteenth century, the arrangement of troops on the field was still based on the old Spanish system. The infantry were usually drawn up in the center in great oblong "battles," pikes in the middle, protected by bastions of "shotte." The artillery was normally placed in front of these, covered by skirmishers, and the cavalry, which might average one-fourth of the whole, was on the wings, or in the rear.

Unable as a rule to face the massed pikes, cavalry had tended to become mere pistoliers, and sword and lance were of secondary importance. The horsemen, heavily armored against musketry, maneuvered in deep squadrons. These squadrons advanced at the trot, and as each rank came up to the pikemen, they discharged their wheel-lock pistols (of which two, and sometimes four, were carried), point-blank into the squares; then wheeled and rode to the rear, making way for the next rank.

The armor in use by the cavalry in the early and mid-seventeenth century was usually confined to a breast and backplate, often worn over a heavy leather coat. This buff coat was, in itself, considerable protection against sword cuts, and in many cases was used



"Lobstertail" helmet and wheel-lock pistol

without the cuirass. The typical helmet worn was the "lobstertail," usually with a sliding nasal. High leather boots and gauntlets completed the attire.

Officers and such units as were still armed with the lance were usually equipped with a closed helmet (with visor and beaver), gorget, pauldrons, back and breastplates, and complete armor for the arms and legs to the knees. Some officers still clung to the ponderous three-quarter suit, but these were becoming rare.

The pikeman usually wore back and breastplate, to which were fixed tassets protecting the front of the thighs. A morion with a small comb, or a low crowned "pikeman's pot" with a wide, drooping brim and cheek pieces, protected the head.

The musketeers occasionally wore the pot helmet but more often only a broad-brimmed felt hat with feathers. Breast and backplates were sometimes worn.

Gustavus was a great admirer of Maurice of Nassau, and he copied that general's use of small regiments made up of companies of less than 150 men, with pike and shot in equal proportions. Gustavus increased the number of muskets to some seventy-five and reduced the pikes to about fifty-five per company. He also decreased the length of the 18-foot pike to eleven feet.



Musketeer

The musket was lightened, so that the heavy forked rest was no longer needed, and his use of the paper cartridge (not his invention, as sometimes stated, but certainly made use of by him for the first time as regular equipment) increased the rate of fire and made possible the reduction of the deeper formations of former days to six ranks.

His arrangements of companies of musketeers and pikemen so as to support each other, yet still bring a maximum amount of fire-power to bear on the enemy, were unique. These companies were formed in brigades, and might vary from 1500 to 2000 men. A diagram of such a brigade, drawn originally by a contemporary English observer, shows a typical, but by no means a rigidly prescribed, formation. Other companies of musketeers were detached, or "commanded" for special duties. It was also his custom to place parties of musketeers in between his cavalry squadrons.

The basic idea of both Maurice and Gustavus was to break down the unwieldy battle into more flexible units. The Swedish brigade was still, like the "battle," a mobile fort, but a much more maneuverable one.

The Swedish heavy cavalry tactics were designed to bring back the shock effect, which had been largely lost by the introduction of the "reiter" with his pistols. They were trained to charge at the gallop, and to use their pistols in the resulting mêlée. Their ranks were three deep, and they were formed in lines of squadrons, sometimes one behind the other; at others, in checkerboard formation.

Gustavus also made use of dragoons. There were essentially mounted infantry, carrying a carbine and a sword. They could act both as light cavalry—or dismounted, as an infantry unit.

The greatest changes that Gustavus made were in the artillery. The seventeenth century artillerist was plagued with a vast number of guns of different weights and calibres—none really suitable for use as mobile field pieces. Carriages were heavy and clumsy and gun tubes were weighty in proportion to their calibre. In consequence, the artillery, once in position, was seldom moved after the action commenced, and became a permanent fixture, to be taken and retaken as the tides of battle swept the field. Another reason for its immobility was the use of civilian drivers for the teams. These gentry frequently took off for the rear with their horses, effectively immobilizing the guns.

Sensing the need for light field pieces, Gustavus at first experimented with a model which he used during his Polish campaigns. This was a copper tube, reinforced with iron hoops, wound with rope, and with a final covering of leather. Minus the carriage, the gun weighed less than a hundred pounds, but it proved too frail for actual use in battle. Discarding this, he designed a cast-iron gun, shorter and lighter than the standard model. This gun, a four-pounder - was less than four feet long and weighed about four hundred pounds. It could be brought into action by a single horse, or a few men. Two were assigned to each regiment. Fixed ammunition, in which powder and ball were handled together, gave these guns a comparatively high rate of fire. It is said that they could be fired eight times while the best-trained musketeers were delivering six volleys. The heavier guns were used as before, but now even these were light enough to be moved in the field.

As befitted the head of a vigorous country with aspirations to becoming head of a military and mercantile empire, Gustavus was a great organizer. He was one of those rare monarchs who combine many talents—he spoke eight or nine languages, designed buildings, wrote hymns (which are still sung), and

was, according to no less an authority than Napoleon, a general second only to Alexander. War being his greatest concern (he had had to fight for his crown against the Danes the very year of his coronation) he applied to it all his brains and energy, and the result was an army, small, but highly efficient, which was equipped and maintained in a manner unheard of in those days. Magazines and supply depots were established and clothing and shelter provided. Baggage trains were kept to a minimum for greater mobility (ten wagons to a squadron and eight to a company) and a corps of sappers accompanied the army, while all troops were trained in the raising of earthworks and bridging of streams.

In contrast to the armies of the Catholic League and the Empire the Swedish troops were kept under a tight discipline at all times. Looting and rape were punishable by death. However, the economy of a poor country like Sweden was incapable of supporting a war effort for long, and Gustavus supplied his armies in great part by a system of subsidies by his allies, and enforced payments from conquered districts. There is no doubt that this worked great hardship in territories which had been the scene of prolonged operations by various armies, but it was a great deal better than the individual plundering by which the Catholic troops were accustomed to supply themselves.

The Imperial forces, on the other hand, had degenerated into trained bands of thieves and murderers. No attempts were made to provide their soldiers with anything - pay was usually months in arrears, if forthcoming at all, and their armies subsisted entirely on the districts through which they marched or in which they were quartered. The situation can be better understood when it is realized that, for example, Count Albrecht von Waldenstein, better known as Wallenstein, had offered to raise an army of 40,000 men at no charge to the emperor. Wallenstein's policy was to "let war feed on war" which meant that the entire burden fell upon the unfortunate inhabitants of Germany. The other armies were no better and it became customary for campaigns to be planned in accordance with which districts were still unplundered and could support a given number of troops for a specific time. As the armies normally tried to operate in "enemy" territory, their methods of obtaining pay and provisions can best be left to the imagination. All made it a point to leave nothing which might be of use to the forces of the opposing side, so that, when one of these semiprivate armies moved on, they systematically destroyed farms, villages, mills, bridges, and everything

they could burn or pull down. In desperation the wretched survivors in many cases turned to cannibalism, and in places, guards had to be placed in the graveyards. Hordes of starving old men, women, and children followed the armies, gleaning what they could from the leftovers of the camps—while wolves howled and wild swine rooted among the blackened ruins of the deserted towns and villages. Bohemia alone put the dead through war, plague, and famine at three-fourth of the population, and conservative estimates place the dead in Germany as a whole at 7,500,000, or more than a third of the inhabitants.

Such license among the soldiery has always resulted in some loss of morale, and although the discipline of the ranks was savage, it could not make up for the lack of it in the camp. Then, too, the desire—in fact the necessity—for pillage robbed the commanders of many opportunities, but in many cases it was as much as a captain's life was worth to try to stop the looting of an enemy's baggage train, or a captured village, and to attempt to recall his men to their duty.

Recruits were obtained by any means, fair or foul, and from enemy as well as friend. Many, having lost homes and livelihood, joined the ranks in desperation. "Whose house doth burn, must soldier turn," ran the saying. Others were enlisted by force. Wallenstein recruiters are recorded as entering a peasant's cottage and putting a coin and a rope on the table. The reluctant "volunteer" could take his choice. Very naturally, such unwilling guests did not make



the best soldiers, despite all the savagery of the drill masters, and the slightest defeat would see them scattering for their homes, if they were lucky enough to have any home still standing.

Another source of disorder and indiscipline in the ranks of the Imperials was the great number of non-combatants which encumbered them. Each army was followed by a host of dependants and hangers-on—mistresses, tarts, peddlers, gamblers, thieves, and scalawags of all descriptions, as well as the crippled and starving. One army of 30,000 was said to have trailed some 140,000 useless mouths in its wake.

However, despite all this, the Imperial troops were composed in the main of veterans, under veteran leaders. War had been part and parcel of European life for so long that there was usually no dearth of tried soldiers—and setting aside their vices (and they were burdened with as much sin as any troops which have ever marched to battle) they were good fighting men. They were resourceful as only veterans can be—steady with the steadiness of men long used to war, and with a soldier's pride in their company or regiment.

Of affection for their officers they probably had none. Their relationship was more that of a valuable worker and his employer. Patriotism could hardly enter into such a war, where no strong national issues were drawn, and it is to be doubted if the majority of the hardened sinners who followed Tilly and Wallenstein were much swayed by religious motives. If the house they robbed or the daughter they raped happened to belong to a Protestant, so much the better. If not, a poor soldier who would probably finish up by being stripped and thrown in a ditch for the wolves to worry should be forgiven a few peccadilloes.

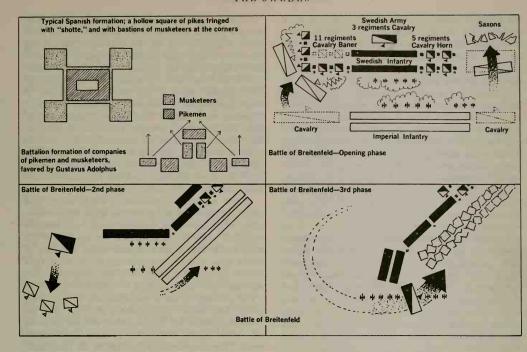
The soldiers that Gustavus led were a cut above the average Imperial. They were the pick of the Swedish countryside - the best in a country which had been turned into what amounted to a military state. Along with them were English and Scottish troops, volunteers who had gone adventuring to the continent, to fight for the reformed faith, for military experience and glory and for the sheer love of fighting, just as their fathers had done in the Low Countries. The stern discipline and their patient training had turned the Swedes into excellent soldiers, while their victories in the Polish Wars and over the Russians had given them confidence in themselves and in their King. As a leader Gustavus was second to none. Interest in their welfare always endears a commander to his men, and in the King's case this was coupled with reckless bravery in the field; willingness to endure all the hardships of a soldier's life, and a reputation as an ever-victorious general. Consequently his men were devoted to him, and would follow him anywhere. The following tribute is from *The Great and Famous Battle of Lutzen*, printed in France in the year following the battle:

"He well understood that faith and loyalty are not to be expected where we impose thraldom and servitude, and therefore at times he would be familiar, as well with the common soldier, as the commander. His invention and execution of all military stratagems were ever twins; for in all his conquests he owed as much to his celerity, as valour. . . . He first praised God, and then provided for man, at once having an eye on his enemies' next designs, and his soldiers' present necessities. . . ."

The Swedish army that followed Gustavus into Germany was a compact and highly maneuverable one, with excellent morale, good discipline, and the finest equipment, superior tactics, and outstanding leadership. Further, the troops were also bound with strong ties of nationalism to each other and to their King. Other things being more or less equal, the results of a clash between the Imperials and the forces of Gustavus could have only one outcome. For their part, the Catholics and their generals had little doubt but that they would shortly sweep the intruders into the Baltic. It was to take a battle to open their eyes to the fact that the almost unbroken run of Imperial victories was at an end.

Gustavus landed on Usedom Island in July 1630 and spent the next months establishing himself in Pomerania. Far from being welcomed with open arms by the great princes of Protestant Germany, he was met with empty promises or open hostility. The Imperial forces had so cowed most of the states that support could only be procured at the point of a gun. The great city of Magdeburg fell and was brutally sacked and destroyed (May 1631) while Gustavus was vainly trying to get permission from the Elector of Brandenburg to move through his territory to its relief. Enraged at the capture of the city and the ensuing massacre, Gustavus marched on Berlin and forced the Elector to end his neutrality. This show of strength brought the forces of Hesse-Cassel and Saxe-Weimar into his camp, and the opportune invasion of Saxony by Tilly induced that overcautious Elector to seek an immediate alliance with the Swedes. Tilly and Pappenheim, who had compelled the surrender of Leipzig, moved north out of the city to meet the advancing allies and the armies met at Breitenfeld.

As the Swedes moved forward across a marshy



stream, Pappenheim led 2000 horsemen forward in a halfhearted attempt to prevent the crossing but was driven off by some Scots of the advance guard and some dragoons. Tilly, an old veteran who had once trailed a pike in a Spanish tercio in the Netherlands, was an expert in the tactics of the time. Accordingly, he drew up his forces in the best Spanish tradition, his infantry, about 35,000 in number, in solid rectangles of some 1500 to 2000 men each, with his cavalry massed in columns on either flank. These latter numbered some 10,000 of whom those on the left flank, the famous Black Cuirassiers, were under Pappenheim, and on the right, under Furstenberg and Isolani. Tilly placed his guns, of which he had only twenty-six, in two groups, the light artillery in front of his center and the heavy, between his center and his right.

Gustavus posted his infantry in the center, in the flexible brigade formations described above, with five regiments of cavalry under Horn on their immediate left, three in the center, and the main body of eleven cavalry regiments under Baner, on the right. Musketeers and light guns were stationed between each of the regiments in the front lines, "Plottons of musketiers, by fifties," wrote Monro, who commanded

a regiment of foot, while the heavier artillery under Torstensson was a little in advance of the center. The Saxons were on the left. Their formation is not known, nor is it important, as we shall see. The Allied army probably totaled about 47,000 men, of whom some 30,000 were Swedes.

The battle began in the prescribed manner, with an artillery duel which lasted for two and a half hours, "During which time, our Batailles of horse and foot stood firme like a wall, the Cannon now and then making great breaches among us."

The Swedish guns, which were getting off three rounds to the enemy's one, as well as being in greater numbers, did sufficient execution in the close-packed formations opposite them that Pappenheim, without orders, and to the rage and disgust of his commander, ordered his cuirassiers forward in a sweeping attack on the Swedish right. The King countered by swinging the cavalry regiments of the second line into position at right angles to those of the first—and it was soon evident that the pistols of the horsemen were no match for the musketry of the "plattons" stationed between the Swedish cavalry regiments. Seven times the Black Cuirassiers closed in, coming up at a fast trot and discharging their wheel-locks into

he Swedish ranks - and seven times the blasts of are from the muskets and light field pieces drove hem back. And as they wheeled in retreat for the ast time, Baner let his long-suffering horsemen go ot at the trot, but a good round gallop. Badly hurt by he Swedish fire, and shaken by their reverses, the uirassiers were in no shape to check a charge made y heavy cavalry at the gallop. In an instant they vere shattered and driven in confusion from the field. Upon seeing Pappenheim's first attack, the comnanders of the Imperial horse on the right wing, hinking the move part of a general advance, also harged - but with far different results. For at the ight of the avalanche of steel pouring down on them, he green Saxon troops first wavered and then, depite all their officers could do, broke and fled in utter uin at the first contact. Gustavus had lost a third f his army at one blow!

The wily commander of the Imperials immediately redered his center to move to the right and by an oblique march put his infantry "battles" on the Swedsh left. But by the time the Imperialists were in heir new position the quicker-moving Swedes had hanged front, and the King had stabilized the flank by wheeling Horn's cavalry to face the new threat, and by bringing up infantry supports from the second ine. The battle was now joined on the new front. Honro wrote:

"The enemics Battaile standing firm, looking on us t a neere distance, and seeing the other Briggads and ours wheeling about, making front unto them, hey were prepared with a firm resolution to receive is with a salvo of Cannon and Muskets; but our mall ordinance being twice discharged amongst hem, and before we stirred, we charged them with salvo of muskets, which was repaied, and incontinent our Briggad advancing unto them with push of pike, putting one of their battailes in disorder, fell on the execution, so that they were put to the route."

The Swedish guns cut swathes through the dense nasses and the Saxon cannon, being recaptured, were urned to enfilade Tilly's flank. Hammered on two ides, the Imperialists were falling fast, when the King lelivered the coup-de-grâce. Gathering up the available cavalry of the victorious right wing, Gustavus ed it in a great charge which swept over the Imperialists' cannon and then, swinging left, thundered down on the wavering enemy. Their artillery lost, and assailed in front and flank, the solid blocks of filly's stubborn pikemen began to melt away. As lusk fell over the smoke-shrouded field, the Imperialists fled, with the Swedish horse plying reddened sabres among the masses of fugitives.

Gustavus was not one to let a beaten enemy rally, and the pursuit was vigorously pressed. Fifteen hundred cavalry, led by the King himself, harried the survivors, taking 3000 on the nineteenth at Merseburg and pushing the pursuit to the gates of Halle.

So ended the battle of Breitenfeld. Its impact on the Catholic states of the Empire was terrific. A large army under a veteran commander had been dispersed by a smaller force of tow-headed barbarians. Nothing stood between the Swedish monarch and Vienna, and his failure to take the city has been debated ever since. Instead, he elected to invade the Rhineland. In three months this rich Catholic stronghold had been subdued and the Spaniards driven back into the Netherlands.

In the subsequent maneuvers, engagements, and sieges, the Swedish King overran most of Germany. Tilly, who had raised another army, was mortally wounded while trying to dispute the passage of the river Lech. The Swedes crossed under a screen of smoke from fires banked with wet straw, while their cannon covered the operation. There was now only one man who could possibly save the Catholic cause -and jealousy at his tremendous and ever-growing power had forced his dismissal in 1630. But the Swedish victories left no alternative and the Emperor was forced to beg Wallenstein to come out of retirement. This he at length consented to do (on conditions which made him almost as powerful as the Emperor himself) and was soon at the head of an army of veterans, many of whom had served with him before.

Much marching and countermarching followed. At Nuremberg the two armies faced each other, the Swedes covering the town and Wallenstein threatening it from a fortified camp two or three miles away. Sickness and lack of supplies forced Gustavus into an attempt to storm the camp and end the impasse. For hours his best troops, his Swedes and Finns and Scots, charged the hill which was the key to Wallenstein's position. Each time they were beaten back. If any troops in the world could have taken it they could, but at last the King ordered a halt. Some 4000 of his veterans had fallen and the Swedes retreated, leaving a strong garrison in the town. A few days later Wallenstein, whose men had suffered nearly as much as the Swedes, also broke camp and retreated.

Later that year, when most armies would have been settled in for the winter, Gustavus moved on Leipzig. Wallenstein's army was entrenched in and around the village of Lutzen and it was here on November 16, 1632, that the King fought his last battle. The Imperial troops, probably numbered about 20,000 - and some 8000 more had been detached under Pappenheim for duty nearby. When the Swedish advance became known these were recalled, but they had not joined at the time the action commenced. Wallenstein had drawn up his forces along the line of the Leipzig road with its right resting on Lutzen, which had been fired. His infantry was drawn up in five great oblong masses, with the musketeers thrust out of each corner-the familiar "bastioned fortress" formation. Four of these "battles" were in the center, and one near Lutzen. His cavalry was on either flank and space was left for Pappenheim's troops on the left flank. His artillery were in two large batteries - one in front of the center and the other toward Lutzen.

The King's troops were in much the same formation as they had occupied at Breitenfeld. The two armies were probably fairly well matched for size although most authorities give the Imperialists a slight edge.

The morning was exceedingly foggy, and it was eleven o'clock before the gunners on either side could see sufficiently to open fire. For an hour the cannon thundered - the orange flashes in the gloom marking the opposing lines. Then, visibility still very poor, as the clouds of powder smoke and the pall from the burning village mingled with the haze, Gustavus ordered an advance. He led his cavalry of the right wing forward, scattered the enemy skirmishers and drove back their horse. Duke Bernhard of Saxe-Weimar, commanding the left was equally successful, but in the center, the infantry, after capturing most of the enemy's guns in the center, was pushed back. Hearing of this check, the King led a regiment of cavalry toward the center of the line. In the thick smog he became separated from his men, and with only three followers, blundered into a party of enemy cavalry and was shot down.

One of his companions escaped, to inform Bernhard that he was now in command. The news of the King's death, which in many cases would have resulted in the withdrawal, if not the actual rout, of his men, only roused them to fury. Bernhard ordered another advance, and while the lines were again locked in combat, Pappenheim's leading squadrons emerged out of the murk. The arrival of that fiery cavalry leader sent the Swedish right reeling back—but he fell in his turn, and the already confused conflict turned into a series of vicious mêlées fought in a dirty gray fog. All afternoon the battle swayed back and forth across the Leipzig road, Wallenstein's batteries changing hands at least five times. But the

Swedes would not be denied. Duke Bernhard ordered forward his reserve brigades in a final effort and the Imperialists gave way. As darkness fell they made good their retreat, this time with no Gustavus hard at their heels. The loss of their leader not only robbed the Swedes of the fruits of their victory but changed the whole aspect of the war. Had he lived there is little doubt that he would have become complete master of all Germany. What would have followed is anybody's guess. Certainly he would have eventually fallen foul of France, for Richelieu, who had supported him with substantial subsidies with a view to keeping a check on the Empire and Spain, could not long have viewed with equanimity a coalition of a united Germany and Gustavus' Baltic empire.

That he did not live was a tragedy for the German people, for without his resolute leadership the war dragged on for another sixteen years. Armies of Swedes, Frenchmen, Saxons, Bavarians, Austrians, Spaniards, and Dutch marched and countermarched through lands which had once been the most prosperous and populous in Europe. Battles were fought in Spain and Italy and one swift raid almost reached Paris. When all countries involved had bled themselves white, the war finally ended. Some countries gained a bit of territory here and there—all lost in the universal ruin and devastation.

As for the Swedes – by the time Lutzen was fought many of Gustavus' veterans were gone – dead at Breitenfeld or on the slopes of the unconquered Alte Veste, or carried off by the diseases which were the scourge of all armies. The last of his old model army perished in Bernhard's ruinous attacks on the entrenched positions at Nordlingen in 1634.

Even at Lutzen one brigade was designated the "Swedish" because it was made up entirely of Swedes - and as the war went on fewer Swedes were to be found in the ranks while an ever-increasing number of foreigners made up the balance. With the growing preponderance of other nationals, and without the firm guiding hand and dominating personality of the King, the discipline of the Swedish forces relaxed. The intangible ties which had bound all ranks to the monarch were broken and the Swedish soldier himself became little better, if any, than his opponent. But Swedish leaders were yet to win great victories and the Swedish tactics - and their splendid artillery - were still superior. This alone was sufficient to keep their reputation alive during the remainder of the war. The peace of Westphalia (1648) which ended the murderous struggle, saw Sweden a great power.

The Boy-King

King Charles X, who came to the throne after the abdication of his erratic cousin, Gustavus' daughter Christina (1654) added more territory to the Swedish crown. The reign of Charles XI, mostly peaceful, gave the country a much-needed rest, but it was marked during the early years of the Boy-King's regency by a decline in military preparedness. This was reflected in the war with Brandenburg and Denmark in which, among other reverses, the great defeat at Fehrbellim did much to lower the prestige of the Swedish soldier.

However, vigorous financial reforms enabled the King to repair the damage that many years of war had done to the army and navy, and when he died (1697), the military affairs of the kingdom were in sound condition. It was as well, for in 1700, Poland, Russia, and Denmark united and invaded Swedish territory. Possibly they thought that the eighteenyear-old King Charles XII would prove but a feeble antagonist. But the young monarch, "the Madman of the North" was to become one of the world's great fighting captains, and one of Sweden's national heroes. Instead of attempting to defend the threatened borders of his empire, he began by attacking Denmark. He set sail in August - he was not to set foot in Sweden again for fourteen years. Within two weeks of his landing the Danes were forced to sign a humiliating peace. Rushing his troops to Livonia he fought his first pitched battle, routing a numerically stronger Russian army under Peter the Great at Narva. Turning then to Poland he cleared the enemy from Livonia, took Courland and Lithuania and finally captured Warsaw and Cracow. Augustus, the King of Saxony and Poland, sued for peace, but the victorious King, by now famous all over Europe, would accept no compromise. In 1707, he forced Augustus to relinquish the crown and Poland, and in the winter of the same year took the fateful step of leading his army against the Czar. It was the largest army he had yet assembled, and with it, Swedish military power reached its high water mark.

But the young King had in his makeup more than a touch of that insanity which seems to come to many too-successful commanders. Great hardships, dangers, and disasters were to him merely obstacles to be cheerfully (often deliberately) met and overcome—exciting incidents in his personal saga. In the months to come he further lost his grip on reality, and the impossible came to him to mean first a

challenge and then an accomplished fact. A slight dash of the "mad genius" is almost a requisite if a commander is to make his mark as one of the great. Carried too far it can only lead to destruction. Strangely enough, it is the general who demands the most incredible feats of endurance from his men; who expects that they follow him through howling blizzards and burning deserts, and at the end, do battle with an enemy twice as strong-it is these leaders who command the greatest respect and devotion. They may be the despair of their subordinate commanders, but they are the darlings of their men. Charles XII was such a one, and although under his brilliant but erratic leadership the kingdom was toppled from a high place among the nations to the status of a third-rate power, to his soldiers and to the Swedish people he was a hero.

The King's star, however, was in the descendant, and a victory in a pitched battle at Holowczyn (1708) was his last. The Russians, playing a role which was to become a familiar one, retreated before him, laying waste the countryside and attacking foragers and stragglers. When it became obvious that Moscow could not be reached Charles turned south to unite with the revolted Cossacks of the Dnieper under their hetman Mazeppa. On the march and in the incidental fighting-for Charles refused to stay in winter quarters - the Swedes suffered terribly. That winter was the coldest in the memory of man; the Baltic froze over, as did the canals of Venice and the river Rhone; casks of spirits froze solid and birds fell dead as they flew. Thousands of Swedes froze to death and many others were disabled by frost bite. The King, who took delight in sharing all the hardships of his soldiers, succeeded in gaining some minor successes but spring found him with numbers greatly reduced. The Czar had occupied Mazeppa's capital and the rebellion had died out. Worse still, Charles's rashness in starting south had caused him to leave before a reinforcing army with supplies and guns had been able to join him. This army had been defeated by the Russians and all its guns and baggage lost.

But these disasters had had no effect on the King. His self-confidence was such that no remonstrances from his generals could swerve him from his purpose of conquering all Russia. He laid siege to the town of Pultova and it was there that two great personalities met in a battle which was to decide the fate—not only of Charles's little army and of Sweden—but of European history. For the drastic reforms which the young Czar Peter was forcing upon the reluctant people of Russia were barely begun. The latent power



of the Slavic giant was as yet untapped, and it was only by the superhuman efforts of a man of Peter's vast energy and ability that it was being stirred out of its sleep. The results of a Swedish victory, coming at such a crucial moment in Russian affairs, are incalculable, and Pultova deserves its place as one of history's decisive engagements.

Battles are things of chance, as well as careful planning, and a bullet, fired at a group of Swedish horsemen reconnoitering a Russian position, may well have changed the course of world events. For the ball struck Charles in the foot, causing such a severe wound that on the day of the battle the King was forced to direct the movements of his troops from a litter. Many battles have been successfully managed under similar circumstances, but unfortunately for Sweden, the very essence of the King's leadership in the field was his dash and his ability to seize instantly on the slightest advantage which rapidly changing events might present. As a fighting general par excellence he won his victories by personal supervision, galloping from position to position and issuing his orders on the spot. Although the Swedes were heavily outnumbered, it is very possible that had the King been able to direct the action in his customary manner he might have won his battle. As it was, the Swedish attack was uncoordinated, vital time and precious men were wasted, and opportunities missed.

The Russians, who numbered some 60,000 men, had entrenched a large camp, and guarded the only practical approach to it with several redoubts defended by musketry and cannon. Although short of men, Charles left 2000 manning the works about Pultova, 2400 to guard his baggage and another 1200 as a flank guard. This left only 12,500, about half of whom were cavalry, for an assault on an army partially entrenched and far stronger in artillery. Peter had more than a hundred cannon, while the Swedes took only four light pieces with them to the attack. The Swedish infantry was so short of ammunition that the troops were ordered to the assault with the bayonet.

The King's plan was to smash through the Russian redoubts in four columns, attack the Russian infantry and cavalry which were formed up behind them, and drive them into their camp, with the Swedes close at their heels. The audacity of a scheme which called for troops, outnumbered five to one, without artillery or ammunition, to attack troops in a strongly entrenched position speaks as much for the high reputation of the veteran Swedish soldiery as it does for the courage of their monarch.

The whole success of the operation relied on the bravery and élan of the troops - and succeed it nearly did. The column with which the King was borne on his litter, "passed in the midst of a violent discharge, both from their small arms and cannons, which later played incessantly on the spaces between the redoubts." The central columns also passed through the line of smoke-shrouded redoubts, and the Russian troops behind were routed. It is said that at this point Peter considered the battle lost. But the commander of the right-hand column, instead of pressing forward regardless of the fire, stopped to carry the redoubts in his path one by one. The Russians defended them stubbornly-and the attack finally ended with the capture of the commander and the dispersal of his column.

This fatal delay gave the Czar time to bring some 40,000 men and many guns into position facing the Swedes. Despite the tremendous odds, Charles ordered his veterans forward, and 4000 infantry advanced steadily against ten times their number. But, "it was impossible our foot could keep their order, or the Men stand the Fire of 70 pieces of Cannon, loaden with Cartouches of small Shot." Those who reached the Russian lines were overwhelmed by the masses of enemy infantry. The Swedish horse could make no headway, and by mid-day all was over. The King was lifted onto a horse (his litter had been smashed by a cannon ball, and most of his bearers killed or wounded) and escaped.

The Russian victory was complete - but the gallant

behavior of the Swedish infantry wrote a glorious finis to their chapter in military history. After many adventures Charles finally made his way back to Sweden and fought desperately to stave off the enemies who swarmed on her from all sides. A Danish musket ball through the head put an end to his amazing career, and Sweden's ambitions as a great military power died with him. But not the glory, and in the roster of the world's fighting men the Swedish soldier holds a high place.



CROMWELL

"For King or Parliament"

DECADE after the battle of Lutzen, there appeared in England a peculiar breed of fighting man, who, while not as well known on the continent as were the soldiers of the "Lion of the North," nevertheless made for themselves a respectable name in military annals. Gustavus would have recognized them, for some of them had served with him in Germany, and he was no stranger to the type. But to their opponents they were a queer lot, grim and dour, much given to psalm singing and the quoting of the Scriptures. Their religion was, however, strongly Old Testament (the more blood and hell-fire the better) and they were more likely to relish texts on Saul's hewing of Agag in pieces before the Lord than a meek passage on brotherly love.

Their laced and curled and beribboned adversaries called them Roundheads, from their practice of cutting their hair short in contrast to the flowing locks of the cavaliers. For some the description was even more apt, for the justice of the King ran much to the cropping of ears, and recalcitrant worshipers who declined to bow the knee to the bishops of the Established Church were often so treated. With or without ears, they were sturdy soldiers, and in their day saw the backs of some of the bravest.

The outbreak of the struggle between King and Parliament found neither side prepared for war. Unlike the continent, which was perpetually racked with conflicts, national or civil, England had not seen armies ranged in battle order since Flodden. Standing army there was none, and the defense of the Kingdom depended on the militia, the so-called trained bands, and experience has shown that these peace-time soldiers prove but broken reeds in an emergency. "Maintained at vast expense,

In peace a charge, in war a weak defense;

Stout once a month they march, a blust'ring band, And ever, but in times of need, at hand."

So the poet Dryden expressed his opinion of them, and in most cases the criticism has proved valid over the years.

Both sides had many gallant gentlemen who flocked with horse and weapons to stand by their King or the Parliament. Some brought their tenants, but the days of feudal warfare were long since over, and untrained rustics, however brave, no longer made an army. Officer material was not wanting, for the wars on the continent had long drawn the adventurous, but when the conflict opened both sides showed lack of military skill and discipline and as time went on the ranks were filled with any and all who could be bribed or coerced into joining the standards.

Sixty years before, an Elizabethan had written: "When service happeneth we disburthen the prisons of thieves, we rob the taverns and alehouses of tosspots and ruffians, we scour both town and country of rogues and vagabonds."

Conditions had not changed in Charles I's time and it may readily be seen that the rank and file was not of the highest quality. Enthusiasm among the common people never ran high, as even when the war had spread to all parts of the country, only a small fraction of the population – 2.5 per cent is one estimate – ever took any active part.

The gentry on both sides, were, in most cases, unsparing in their efforts. They were deeply involved, emotionally or intellectually, in the struggle, but the majority of commoners, to whom, in those days, talk of rights and privileges meant very little, held aloof. By and large, the inhabitants of the large cities, whose livelihood by trade and manufacture was more likely to be threatened by taxes and the monopolies so dear to the King and his favorites, were for the Parliament. In the country areas, especially in the more backward feudal-minded counties of the north and west, sentiment ran more for the Royalist cause. This worked to the King's advantage. For while at the outbreak of war Parliament held most of the large towns, the fleet, and controlled much of the money, the King's forces contained better fighting material. This was due to the fact that the majority of the landed gentry were Royalist in sentiment, and were, besides, accomplished horsemen and accustomed in some degree to the use of weapons.

Thus at the outset the King was in possession of a good, if somewhat undisciplined, cavalry force. He was fortunate too in having the services of his nephew, Prince Rupert, Duke of Bavaria. This remarkable young man —he was twenty-three when he joined Charles, and had served in the continental wars since he was fourteen—became Charles's Lieu-



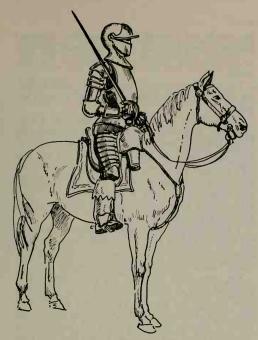
Royalist Cavalier

tenant-General of Horse. He made a superb one – a mixture of Murat and Custer – reckless, brilliant, and full of spirit. His troopers, mostly cavaliers as young and daring as their leader, swept the Parliamentary levies off the field time after time, until their very reputation struck terror into their enemy's ranks.

Among the country gentlemen who supported the Parliament was a Huntingdon squire named Oliver Cromwell. He was a member of Parliament, a religious man of the Independent persuasion and had no military training whatsoever. He did have, however, a stout heart, a good measure of faith, a keen eye for ground, and great resolution.

When it became apparent that the differences between the King and his Parliament were to be decided by arms, Cromwell raised a troop of horse which speedily became known for its discipline and efficiency. The battle of Edgehill (October 23, 1642) held two important lessons for an observing captain of horse; the shock effect of cavalry charges delivered at the gallop; and the absolute necessity for keeping the cavalry under control after the charge had been made.

The impetuous Rupert and his dashing cavaliers



Royalist Cuirassier

were to throw away victory after victory by failing to halt after a charge; Edgehill was a good example. The Royalist cavalry drove the inexperienced Parliamentarian horse from the field and through Kineton, where their baggage train lay. But while the Royalist cavalry were busy plundering the wagons, the Roundhead infantry had somewhat the better of their fight, and when Rupert finally reappeared the Royalists had been driven from their positions. It is reported that he remarked, "I can give a good account of the enemy's horse," whereupon a disgusted cavalier swore, and exclaimed, "Ay! and of their carts too."

Granted, it is no easy thing to check a cavalry charge and pursuit, and the Duke of Wellington was to complain bitterly of the same fault, at a date when army discipline was a great deal stronger than in King Charles's day. But it can be done, as Cromwell proved later, and it was by keeping his victorious troopers in hand at the critical moment that he won many of his victories.

But to beat men such as Rupert led, it was necessary to enlist and train a class of soldier far superior to those on which the Parliament normally relied. Cromwell saw this clearly and applied the principle

when recruiting his own force. "Your troopers," he once remarked to a Parliamentary leader, "are most of them old decayed serving men, and tapsters, and such kind of fellows; their troopers are gentlemen's sons, younger sons, and persons of quality; do you think that the spirits of such base and mean fellows will ever to able to encounter gentlemen, that have honor and courage and resolution in them? You must get men of spirit . . . of a spirit that is likely to go as far as gentlemen will go — or else you will be beaten still."

In 1643 Cromwell returned to the east coast, where he set about raising enough men to convert his troop into a regiment. Realizing that, all other things being equal, men with a cause fight better than men without, "He had a special care to get religious men into his troop: these men were of greater understanding than common soldiers . . ."

His regiment of the godly evidently merited some notice for a newsletter recorded that Colonel Cromwell, "hath 2,000 brave men, well disciplined; no man swears but he pays his twelve-pence; if he is drunk, he is set in the stocks. . . . How happy," the writer concludes, "were it if all the forces were thus disciplined."

"I beseech you," Cromwell wrote, "be careful what captains of horse you choose. . . . If you choose godly honest men to be captains of Horse, honest men will follow them . . . I had rather have a plain russet-coated captain that knows what he fights for, and loves what he knows, than that which you call a gentleman and is nothing else." (The italics are the author's.)

The new regiment, with its non-drinking, nonswearing troopers and their "plain russet-coated" captains soon proved its worth. At Grantham (May 1643) Cromwell defeated a force twice as numerous as his own and won another victory at Gainsborough (July 1643). In January 1644, his services gained him the post of Lieutenant General of the powerful Eastern Association and in June, he commanded a force of 3000 before York. The battle of Marston Moor (July 1644) saw Cromwell in command of the cavalry of the Eastern Association, which, with the Scottish Horse under Leslie, formed the left wing of the Parliamentary army. After facing each other for some hours, the Royalists, believing there would be no battle that day, dismounted, and Rupert rode off to his coach. This did not escape Cromwell's sharp eye, and he immediately advanced. Surprised, the first line of Royal horse was driven back, although the nature of the ground made it necessary to bring the Parliamentary cavalry into action piecemeal. Rupert, furi-



ous at having been caught off guard, brought up his second line and drove Cromwell's men back in their turn, only to be taken in flank by Leslie and his Scots. A fierce cavalry fight followed and ended with the rout of the Prince's hitherto invincible horsemen. By leaving the pursuit to the Scots, and keeping his own men well in hand, Cromwell was able to bring his force to the aid of the right and center, which were in sore straits. His timely appearance on the right scattered the Royalist horse there and turned the battle against the Prince's infantry, who fought stubbornly until cut down or scattered. It is said that it was at Marston Moor that Rupert bestowed the sobriquet of "Ironsides" on Cromwell's victorious troopers.

The results of Cromwell's efforts to improve the forces under his command were so obvious that in January of 1645, an ordinance was passed by the Commons authorizing the establishment of a regular army of 22,000 men – 14,400 infantry and 7600 cavalry. The infantry were to be organized in twelve regiments each of ten companies of 120 men. Seventy-eight men in each company were to be musketeers, and forty-two pikemen. The cavalry of this New Model army were organized in eleven regiments, each of six troops of one hundred men. They were equipped much as were those of Gustavus: "lobster tail" helmet, cuirass,

two pistols, and a sword. There were also a thousand dragoons, these last carried a light musket but wore no cuirass. They formed one regiment of ten companies.

The artillery eventually had fifty-six guns, excluding mortars and there was also a small corps of engineers.

But the New Model was more than just a reorganization, with more regular pay and red coats (the traditional color of the British army uniform is said to have dated from this time). Cromwell and the men who had pressed for the passage of the New Model Ordinance were Independents and the volunteers who made up its ranks were sectarians to a man, fighters who were more concerned with liberty of worship than with pay or plunder.

"I raised such men," Cromwell boasted afterward, "as had the fear of God before them, as made some conscience of what they did, and from that time forward, I must say they were never beaten. . . ."

The new army, although not fully organized or equipped, had an opportunity to show its worth that same summer, for on June 14, the two armies faced each other at Naseby, in what was to be the decisive battle of the war. The King could only marshal 7500 men, 4000 horse, and 3500 foot. Facing him were 6500

Cavalryman of the Parliamentary Army



cavalry and 7000 infantry. Both sides were in the accepted battle formation of the times—infantry in the center with their artillery in front and cavalry on both wings.

The Royalists attacked, and when a musket ball wounded Henry Ireton, who commanded the cavalry on the Parliamentary left, Rupert took advantage of the momentary disorder and succeeded in driving them off the field. The customary confusion followed the victory of Rupert's troopers and they pursued Ireton's men to Naseby, where they made an unsuccessful attempt to capture the enemy's train. In the meantime, the Royal foot, under the eye of the King, made a furious assault on the enemy infantry. "The Foot on either side hardly saw each other until they were within Carbine Shot, and so only made one Volley; our falling in with Sword and butt end of the Musquet did notable Execution; so much as I saw their Colours fall, and their foot in great Disorder." (Walker in his Historical Discourses)

Cromwell had in his turn routed the Royalist right, but instead of pursuing the flying enemy with his whole force, he dispatched three regiments for that purpose, and swung the remainder of his command against the flank of the Royalist foot. The King was about to lead his guards forward to the aid of the center when a Scottish earl laid hands on his bridle. Swearing, he exclaimed: "Will you go upon your death in an instant?" and turned the King's horse around, whereupon his men also turned and spurred off the field.

The gallant Royalist infantry was now attacked in front, flank, and rear, and resistance being hopeless, they surrendered by hundreds. Rupert arrived on the scene at this point, his men disorganized and his horses blown. Realizing that the infantry was past saving, he too rode off the field, with the Ironsides in pursuit. Scarcely 1500 of the King's men escaped, with the loss of guns, baggage, and colors.

The Bible-reading army met a foe as dour and prayerful as themselves when they fought their erst-while comrades, the Scots, but Cromwell was in full command now and the smashing victories of Dunbar and Worcester only added to their laurels. Nor were the triumphs of the Commonwealth confined to the land, for on the ocean the "Generals at Sea" Blake and Popham and Deane won great glory against the Dutch and Spanish.

It was a far cry from country squire to Lord Protector, but the weapon which Cromwell had forged served him well, in peace as well as in war. With such a disciplined force behind him he had little to fear from rebellion at home or invasion from abroad. British ships sailed the seven seas without let or hindrance, a British fleet had operated in the Mediterranean for the first time in history and a force of British across the channel had been instrumental in winning a victory at Dunkirk against the Spanish.

Not for many years was British power and prestige to rise as high as it stood during Cromwell's rule. After his death (1658), the Commonwealth he had governed soon welcomed the son of the man he had helped bring to the scaffold. The "Merry Monarch" ruled in his stead and the stern days of the dictatorship were forgotten. But the memories of the victories remained and men were to regret their Roundhead leaders when Dutch cannon sounded in the Medway and the Thames was lit by the glare of burning British warships - while "The King did sup with my Lady Castlemayne, at the Duchess of Monmouth's, and they were all mad in hunting a poor moth." No wonder, as Pepys wrote: "Everybody now-a-days reflect upon Oliver and commend him, what brave things he did, and made all the neighbor princes fear him."

They had feared Oliver; but they had feared even more the men who had made him what he was: the ranks of grim horseinen, clad in steel and buff, with a bright sword in one hand and a Bible in the other.



THE PRUSSIANS OF FREDERICK THE GREAT

The beginning of modern warfare can be traced to two main causes: the rise of the unified state, with its emphasis on centralization of all affairs, stabilization of industry and trade, and control of revenues; and the invention of the bayonet. The former made possible—or rather, inevitable—the organization of regular armics on a permanent footing. The latter made possible the employment of these armies with concepts of strategy and tactics suited to the new weapons which were being introduced.

In a comparatively short space of time the whole art of war changed. No longer were wars begun with the rallying of gentlemen with their servants and tenants, and the arming and equipping of companies of scarcely trained militia. The weapons no longer had to be forged after the war had begun but lay

ready, sharp and polished, to their master's hand. And no longer need the commander in the field ponder the best place for his masses of pikemen to support his files of shot. Now fire and shock were combined in one, able to be armed, equipped, marched, drilled, and maneuvered in the field as one integrated whole. No longer did captains worry lest their companies of shot be caught by cavalry without their protective forest of pikes. Now, at a word, each musket sprouted a blade of steel and every musketeer became a pikeman.

When to this startling innovation was added the adoption by the European armies of the improved flintlock musket, fire-power on the battlefield became the decisive factor. Gone were the yards of slow match, so dependent on wind and weather. And gone too, were the temperamental wheel-locks with their

keys and spanners. Now musket, pistol, and carbine all had the same mechanism and could be serviced with the same simple tools. Not only was the rate of fire increased but the abolition of the pikeman also doubled the number of muskets in the ranks. Steady but sure progress was being made with the design and manufacture of artillery also, and that arm was gradually being made more mobile.

These then were the new tools which awaited the great captains and splendid soldiers of the eighteenth century. And great captains there were in plenty; Charles XII, Marlborough, Eugene, Saxe, Clive, Wolfe, Washington, Suvorov, and the wearers of the tricolor coekade. Their fame and the glory won by their men has become part of the military traditions of their nations. But, if an impartial judge of the martial virtues had been asked to pick the general and soldiers who had won the highest reputation in the century he would have unhesitatingly chosen Frederick II—called "The Great," and his incomparable Prussian army.

His choice would have implied no disparagement of the generals and troops mentioned above. Frederick was not so consistently successful as the Duke of Marlborough, nor more daring than Charles. Nor were his Prussians braver than the red-coated columns at Fontenoy, hardier than the sturdy peasants of Count Aleksandr Suvorov, or more patriotic than the men who starved and shivered at Valley Forge. But as fighting machines, drilled to march and wheel and fire and charge faster and better than any soldiers had ever done before, they were unequaled. And the man who led them—statesman, poet, strategist, social reformer, philosopher, organizer—was without doubt one of the great captains of his or any other age.

The rise of Prussia is a good example of the potential power inherent in a small semi-military state, ruled by capable and industrious men who had only the safety and strengthening of their realm at heart. The history of Prussia as a nation properly begins in 1701 when Frederick I, Margrave of Brandenburg, had himself crowned King of Prussia. But long before that the rulers of Brandenburg had by war, marriage, and treaty skillfully contrived to keep their lands intact, and from time to time enlarge them. This policy was best exemplified by the previous Margrave, Frederick William, known after his great victory over the Swedes at Fehrbellin as the "Great Elector" (the Margraves of Brandenburg were one of the nine princes who had the right to elect the Holy Roman Emperor). Firm in the belief that a strong army is as useful in diplomacy as in the field, the Margrave wielded pen and sword with good effect. His just rule and his insistence on religious toleration in his lands not only endeared his people to him (an unusual sentiment in the Germany of those days) but attracted thousands of Protestant refugees from France and the Netherlands (all to become, in time, full-blooded Teutonic ancestors of the master race).

Under Frederick the army was further increased, and on the battlefields of the War of the Spanish Succession the Prussian troops won an enviable reputation.

He was succeeded in 1713 by his son, Frederick William. This monarch was a fantastic despot; coarse and brutal, given to fits of violent temper, miserly, a great organizer and a prodigious worker, and fanatically dedicated to the aggrandizement of the Hohenzollerns and the enlargement of the Prussian dominions. The money he saved by the rigid economies which he enforced in every branch of government - including the Royal household, (the Queen was allowed one waiting woman) - he spent on the army. This was raised from 50,000 to 80,000 men, in large part by impressment. Crimps and press gangs were as busy throughout the Prussian domains as in an English seaport in wartime and any gaps left by these methods were filled by a limited form of conscription. All nobles were compelled to serve in the officer corps, thus binding the feudal nobility to the crown by rigid military ties. Their young sons were trained in military schools and this cadet corps of young Junkers supplied the officers for the expanding army. His one hobby, which he pursued with a passion equaled by few collectors of rare objects, was a regiment of giant grenadiers, whom he bribed, or kidnaped, from every corner of Europe. According to General Fuller an outsize Italian abbé was sandbagged and seized while celebrating Mass in an Italian church, and extra-tall girls were taken to provide fitting mates for these military monsters. Frederick's precious langen kerle, his "long fellows" never saw action and one of Frederick II's first acts as King was to disband this expensive collection of freaks.

As might be expected from so industrious a monarch, the princes and princesses of the Royal household totaled fourteen. But Death makes no distinction between prince and pauper, and it was the fourth son, Carl Frederick, who became Crown Prince, a title which must at times have seemed far more of a burden than an honor. For Frederick William (who was not above taking a stick to the Queen, or to anyone else he met, councillor of the kingdom or lackey, if he felt so inclined) did not spare the rod on his children. Unfortunately, the sensitive boy, whom fate had singled out as heir to the throne, was the very



Prussian Horse Grenadier

antithesis of everything the good King believed a future ruler should be. Few children have been treated as was young Carl Frederick. Furious beatings, semistarvation, insults, humiliation, and studied cruelty was his lot almost until the day of his father's death. Twice the King in blind rage nearly killed him—once trying to strangle him with a curtain cord and on another occasion, being narrowly prevented from running him through with a sword.

Driven nearly out of his mind by persecution, the young Prince decided to flee. His plan reached the King's ears, and the youth was arrested, tried for desertion and, at his father's insistence, ordered to be shot. Only the intervention of many prominent persons, including the Emperor, induced the old tyrant to spare him. The Prince was, however, forced to witness the execution of his dearest friend, a young lieutenant, who had aided him in his plans.

With such a monster for a father, it was a miracle that the young Prince retained the moderation and good sense which he habitually displayed in his dealings with individuals. His dealings as a statesman, on the other hand, were marked by cynicism, ruthlessness, deceit, greed, and downright dishonesty to a degree rare even among the crowned heads of Europe.

But the painstaking study and inspection of everything pertaining to the Prussian domains, from dam building to pig breeding—all drummed into the reluctant recipient by force or threats of force—taught the young Prince to know his future kingdom as few monarchs have ever done. And between Prince and people was forged a strong bond of affection and respect—a fact which would be of great importance when the kingdom was all but overrun by enemies.

During the last years of the old King's reign a truce of sorts was patched up between father and son, Frederick, having dutifully married the bride selected for him, and showing interest and even zeal in absorbing the workings of the Prussian state, was allowed to keep a little court of his own at the castle of Rheinsberg. Here he indulged his literary pursuits, played the flute, and philosophized with his friends. many of them French. (It was this Francophilia which used to drive his father into his most ungovernable rages.) This hedonistic existence, which Frederick often declared was the happiest of his whole life, fooled many of his contemporaries into believing that a great new era of culture and enlightenment was to flower in Prussia when the young poet and philosopher ascended the throne. How wrong they were!

Within six and a half months of his accession he had deliberately plunged the kingdom into war. The conflict which Frederick so cold-bloodedly began was not entered into lightly or rashly. On the contrary, it was the cool and calculated move of a man who had carefully weighed the odds. And the factors which influenced him most were the very things on which the Prussian state had been built: a sound financial system and the army. Thanks to his father's stringent financial measures the treasury was bulging and the army was a splendidly organized force of some 80,000 men, drilled as no soldiers had ever been drilled before.

This training was so rigorous, with floggings, beatings, and other forms of corporal punishment awarded for the slightest infraction of discipline or slowness in compliance with orders, that war service was considered a blessed relief. No private soldier in that age was treated as anything but a being of a distinctly inferior class, but the relationship between the ignorant, brutal, petty nobility, and the even more ignorant peasants who made up the rank and file of the Prussian army seems to have been particularly bad. To his officers, the Prussian soldier was not a human being, but a lump of blue-clad clay, to be pummeled and pounded into a senseless robot, incapable of independent thought. ("If my soldiers began to think," Frederick once remarked, "not one

would remain in the ranks.") His own thought on his soldiers and on officer-enlisted men relationship are revealed in the following:

"All that can be done with the soldier is to give him esprit de corps—i.e. a higher opinion of his own regiment than all the other troops in the country. Since the officers have sometimes to lead him into the greatest dangers (and he cannot be influenced by a sense of honor) he must be made more afraid of his own officers than of the dangers to which he is exposed."

The splendidly trained Prussian soldier was not to be needlessly wasted, however. He was a pawn in the great game of war and power politics, and one all too difficult to replace. Wrote Frederick: "To shed the blood of soldiers, when there is no occasion for it, is to lead them inhumanely to the slaughter." On the other hand, like any good general, he used them unsparingly when it served his purpose, and their blood flowed in rivers.

Inhuman as the Prussian system of drill and training was, on the battlefield it paid big dividends. The tactics of the day did not call for individual initiative on the part of the soldier or company officer—on the contrary, they demanded unquestioned obedience and the automatic response to command. The motions of loading and firing were repeated endlessly until they could be carried out with machine-like precision under any circumstances. Close order drill, with the emphasis on speed of maneuver and the maintenance of perfect order, was practiced against the day when complicated evolutions must be carried out in the smoke and confusion of battle, with cannon balls raking the ranks and half the officers and NCOs down.

The Prussian cavalry, big men, well mounted on powerful horses, had been carefully trained in the cavalry tactics then prevalent in Europe, i.e. to move in large masses and to charge at the slow trot, using pistol and carbine. This did not suit Frederick's style of fighting, and after his first campaign he retrained his horsemen to maneuver at speed, and to charge "all out," sword in hand. The use of firearms while mounted was prohibited and equipment and armament was lightened. Every effort was made to ensure that the cavalry moved rapidly while still keeping good order and correct alignment.

A contemporary, in describing the state of perfection to which Frederick had brought his cavalry, wrote:

"It is only in Prussia that the horsemen and their officers have that confidence, that boldness in managing their horses, that they seem to be confounded with



Prussian infantryman

them, and to recall the idea of centaurs. It is only there that sixty or eighty squadrons of 130 or 140 effective men each can be seen going through the maneuvers that a whole wing of cavalry well commanded can execute in the field. It is only there that 8,000 or 10,000 horsemen can be seen making general charges for many hundreds of yards, and halt after making them in perfect order, and immediately commence a second movement against a new line of the enemy which is supposed to present itself."

In this startling change in the accepted handling of cavalry Frederick had the co-operation of two generals of cavalry, Seydlitz and Zieten, who were to lead the Prussian horsemen to victory after victory, and to completely discredit the old methods. Another military writer of the period said: "Experience has convinced me in more than a hundred occasions, for I have never seen a squadron depend upon its fire, that it has not been overthrown by that which came upon it at speed without firing."

Colonel George Taylor Denison, the Canadian author, in his *History of Cavalry*, wrote:

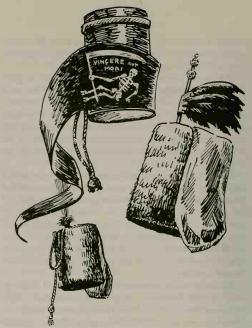
"At no time in ancient or modern history, not even in the wars of Hannibal and Alexander, have more brilliant deeds been performed by the cavalry than were achieved by the horsemen of Frederick the Great in his later wars; and the secret of their success lay in the careful training of the individual soldier, in the constant maneuvering in masses, in the reliance upon the sword, and in the fiery energy as well as the prudent judgment of the great generals who commanded it."

He also mentions a note to one of Frederick's memoranda on cavalry tactics. "N.B. - If it is found that any soldier is not doing his duty, or is wishing to fly, the first officer or sub-officer who perceives it will pass his sword through his body." A salutary measure which has done its part in maintaining discipline since history began and, one hopes, will continue to be employed in the future. One coward can infect a company, and a shaky company may lose a battle. Whether to sabre or shoot down a fellow soldier is an agonizing decision which any officer or NCO might sometime face. However there are times when men will not be held even by the fear of being thought afraid (which is in large measure why most men stay in place when every instinct tells them to run). At such times the knowledge that possible death, with honor, lies in front, while certain death and disgrace waits behind is a useful deterrent.

The Prussian horse was of three types: cuirassiers, dragoons, and hussars.

Cavalry had, almost from historical times, been divided more or less into three groups, light, medium, and heavy. Light: for scouting and swift forays. Medium: more heavily armed and armored than the light, while still retaining quickness of movement. Heavy: big men on big horses, often completely armored - slow, but winning by the very weight and momentum of their onset. By Frederick the Great's time these divisions had been further complicated by the use of firearms. There were cuirassiers, who still retained the breast and backplate and who were armed with two formidable pistols as well as a heavy sword; dragoons, both heavy and light-armed with short musket and bayonet as well as a sword, and capable of fighting on foot, if necessary; horse grenadiers, whose functions were much the same as heavy dragoons; hussars-light cavalry but armed with sword and a still shorter musket, called a carbine, and -in some services - lancers, both heavy and light.

However, to offset this multiplicity of cavalry types, there was an increasing tendency (especially in the Prussian service) to treat all types alike, and to use light dragoons and hussars in the line of battle along with the regiments of heavy cavalry. This tendency became even more marked in the following century and by the time the horse vanished from the battle-field, there was little difference in arms, equipment,



Headgear—Death's Head Hussars and Busbies of 2nd Life Hussars

and function between cavalry regiments of any type. Frederick's cuirassiers and dragoons were organized in five squadrons, each of two companies of seventy men. Each regiment had thirty-seven officers, seventy noncommissioned officers, and twelve trumpeters. The hussars, who were the light cavalry, were of ten squadrons each. The squadron formation adopted toward the close of the Seven Years' War was in two ranks, and for the charge the regiment formed in two lines, the squadrons in the first line with small intervals and the second, or reserve line, in more open order.

Because they were often used in small parties, or singly, as videttes, thus having ample opportunity to desert, the cavalry were recruited with some care, being taken from the sons of well-to-do farmers and small landowners. In case of desertion the parents were held responsible for the loss of both soldier and horse.

To support his masses of cavalry, Frederick organized the first horse artillery, light horse-drawn guns and limbers with mounted gunners. These gave a new dimension to cavalry tactics. For the first time the fire-power of artillery was added to the shock effect of charging horsemen. Heretofore, cavalry, until the moment came to charge, were at the mercy of enemy

artillery, suffering cruel losses as they sat their horses, often for hours, under punishing fire to which they were unable to reply.

Artillery played a prominent part in the wars of the eighteenth century and Frederick's armies were well-supplied with 3-, 6-, 12-, and 24-pounder guns. Frederick also made considerable use of howitzers, 18-pounders, which could lob a shell over a hill and explode it among troops concealed on the other side.

However, the artillery shell, although introduced in the sixteenth century, had never been improved—in fact was not capable of improvement to the point where it was a major factor on the battlefield. The bursting charge was too small, and the fuses too inefficient—in some cases, exploding the shell in the gun tube, or more often, not exploding at all. Not until the advent of the rifled cannon throwing a cylindrical shell with a percussion fuse would these missiles become effective. Case shot was the chief killer, and would remain so until after the American Civil War.

The infantry regiments of the Prussian army were of two battalions—each of eight companies. Of these, one was the grenadier company. Grenades were no longer used except in siege warfare, but the special companies of the tallest and strongest men were still retained, although also armed with the musket. They were considered the clite company of the regiment and often wore a distinguishing uniform or cap. (This practice was copied in several armies—there was usu-

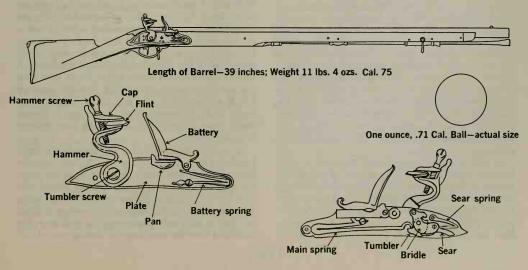
ally a light company of skirmishers, also.) Battalions were formed for action three deep.

The Prussian soldier was furnished with an iron ramrod at a time when other armies used one of wood. The weight and indestructibility of the metal rod gave an advantage in loading, but it was the endless drill which enabled the Prussian infantry to deliver five volleys in a minute, at a period when other nations were lucky if their soldiers could fire twice in that time.

This clockwork precision was seldom if ever equaled. It was attainable only with long-term professional troops drilled to within an inch of their lives. At the time of Waterloo, the musketry of the British infantry was considered the deadliest in the world. Drill called for a man to be able to load and fire fifteen times in three and three-quarter minutes—four rounds a minute. While their rate of fire may not have equaled the rapidity of Frederick's Prussians, it was probably a little more accurate, as the British soldier was at least taught to aim before pulling the trigger.

Fire was by companies (pelotonfeur), instead of by ranks and began from both flanks of the battalion. As the commander of the flank company gave the order "Fire" the commander of the next gave "Ready" and so on to the center. When the two center companies had fired, the flank companies were loaded and ready. In the advance each company moved for-

"Brown Bess" Tower Musket



ward a few paces before firing. Thus the battalion's advance was made up of a series of company movements, rolling slowly forward and erupting flame and smoke at three-second intervals as the *pelotonfeur* flashed along its front. At some thirty paces, or when the opposing ranks gave sign of disintegration under this leaden hail, the charge was ordered and the men went in with the bayonet.

It has been said that the small arms of the days prior to the adoption of the rifled musket were adequate for the tactics of the time. Say rather that the tactics of the period, as of all periods in history, were dictated by the existing weaponry. These were crude indeed by modern standards. The principle weapon, the infantryman's arm, was the smoothbore musket. As this firearm was used by all nations until well into the second quarter of the nineteenth century, it may

be as well at this point to describe it.

The flintlock, which had succeeded the matchlock, wheel-lock and snaphaunce of the seventeenth century, was by comparison to its predecessors an efficient mechanism. Its lock was rugged, and easy to manufacture and repair. Ignition was produced by a piece of flint held in the jaws of the cock, striking sparks from the face of a piece of steel called the battery, which flew up, uncovering the pan, into which powder had previously been poured. From the pan a touch-hole led into the chamber. When properly loaded, the flint in good order (spares were carried. The British were issued three with each sixty rounds) and correctly adjusted, the priming powder in the pan dry, and the touch-hole unclogged, the gun functioned. If, on the other hand, the flint was too worn, or rain or dew had dampened the primer, or if the filthy residue left over from the previous discharge had filled the touch-hole, then the gun would misfire. This occurred, on the average, once out of every seven rounds. There was also the hazard that the charge itself might get wet, or that a flustered recruit might load the bullet before the powder. In this case a corkscrew-like attachment was fixed to the ramrod and the ball laboriously withdrawn. This operation, needless to say, could not well be performed during the heat of battle, and any muskets so disabled stayed out of action until the engagement was over.

An officer, writing in 1796, complained of: ". . . the baddness of the flints, and the softness of that part of the pan-cover of his firelock that the soldier calls the hammer. This is so general, that take at a venture any number of men, and after ten or twelve rounds of firing, you will find at least a fifth part of the cartridges have not been used, consequently one man in five

would be useless as to any real effect. This we see every day at field-days and reviews; and upon service, I have seen soldiers try their pieces again and again, to no avail. . . ."

Considering the number of steps involved in its operation, the flintlock musket could be loaded and fired fairly rapidly, the length of the process depending entirely on the amount of training, and the personal steadiness of the individual soldier. The Tower musket, which became world-famous under the nickname "Brown Bess" was representative of the type with which all armies were equipped. Like its contemporaries, it had remained virtually unchanged since the beginning of the eighteenth century. It was heavy, eleven pounds and four ounces, not counting the eighteen-ounce bayonet. The bore of the thirty-nine inch barrel was .753 inches and the ball weighed an ounce. The ball was contained, with the powder, in a paper cartridge, the end of which was bitten off and, after some of the charge had been sprinkled in the pan, was emptied down the barrel. The ball was then rammed down on top. The charge was six drams, and because of the excessive windage (windage is the difference between the size of the ball and the diameter of the bore, the ball being made smaller to allow for fouling and variations in bullet size, and to ensure ease of loading) much of the explosive force of the charge was lost. The windage, which in the Tower musket amounted to almost 1/20 of an inch, also allowed the ball to pursue a peculiar course down the barrel when fired, rattling, rolling, and bumping its way to the muzzle, so to speak, and on flying out, taking the course which the final bump imparted to it. With such a combination of barrel and ball, any accuracy beyond a few yards was impossible. Sixty per cent of hits on a target representing a line of mensix feet high by a hundred feet long-at seventyfive yards gives an indication of the accuracy of the weapon; and this under target-practice conditions. A single man at such a range had a better than even chance of surviving. Above that distance accuracy fell off so fast that at 150 yards any hits were a matter of luck. An expert might do better. A famous shot, a major in the British army of the Revolutionary War days wrote:

"A soldier's musket, if it is not exceedingly badly bored and very crooked, as many are, will strike the figure of a man at 80 yards—it may even at 100 yards. But a soldier must be very unfortunate indeed who shall be wounded by a common musket at 150 yards, provided his antagonist aims at him; and as to firing at a man at 200 yards, you may just as well fire at the moon and have the same hopes of hitting your object.

I do maintain, and will prove whenever called upon, that no man was ever killed at two hundred yards by a common soldier's musket by the person who aimed it at him . . . and in general service, an enemy fired upon by our men from 150 yards is as safe as in St. Paul's Cathedral."

The major's marksmanship notwithstanding, modern tests with muskets of the period show results more similar to the first set of figures. Given the natural excitement of a soldier under battle conditions, accuracy would be cut by a sizable percentage.

In many ways it was a miscrable weapon. True, it was sturdy and simple to operate, and in this respect was a fitting companion for the sturdy and simple peasant who carried it. It made a useful holder for the bayonet, with which many actions were still decided, but as a missile weapon it left a great deal to be desired.

With a firearm that was effective at not much more than 40 or 50 yards it is small wonder that many attacks were made with unloaded muskets, using the cold steel alone. There was, however, another reason for attacking thus with the bayonet. It was not always easy to work a body of men up to the proper pitch of enthusiasm necessary to induce them to advance under heavy fire, especially if they had tried previously and suffered a reverse. Drums could rattle and officers shout and wave their swords, but there might be a certain reluctance on the part of those in the front ranks to take the first step. Once the formation was in motion therefore, it was essential that it did not stop before reaching its objective. If the front ranks halted to fire, then there was the possibility that the attack would develop into a fire-fight and the charge would lose all momentum.

The World in Arms

To return to Frederick; in May, 1740 old Frederick William died and we find the royal essayist and poet with a throne, a magnificently trained army and a well-filled treasury. He also had temptation, in the form of a weak neighbor—not only weak but a woman, and a beautiful one at that.

When the head of the loosely knit Holy Roman Empire, Charles VI, died on October 20, 1740, he left no male heir—only a daughter, Maria Theresa. An agreement, called the Pragmatic Sanction, had been made which guaranteed her the succession. The compact had been recognized by all the powers, with the

exception of Bavaria. Frederick, who was also bound by this solemn agreement, coveted the rich province of Silesia. He resolved to seize it, basing his action on a shadowy and antiquated claim. This claim was advanced for propaganda purposes (of which art the King was a master). Secretly he admitted that, "Ambition, interest, the desire of making people talk about me, carried the day, and I decided for war."

The King sent the Queen a message offering, in exchange for legalizing his claim to the stolen territory, to defend the rest of her dominions against any other power. This Mafia-like offer of "protection" was indignantly declined, and the Austrians prepared for war. However, so suddenly did Frederick strike that thousands of his troops were over the border before the young Queen knew that he was on the march. Totally unprepared for such a move, those of her forces stationed in Silesia were speedily driven out. The seizure of Silesia had far-reaching results. To quote Macauley:

"The whole world sprang to arms. On the head of Frederick is all the blood which was shed in a war which raged during many years and in every quarter of the globe, the blood of the column of Fontenoy, the blood of the mountaineers who were slaughtered at Culloden. The evils produced by his wickedness was felt in lands where the name of Prussia was unknown; and, in order that he might rob a neighbour whom he had promised to defend, black men fought on the coast of Coromandel, and red men scalped each other by the Great Lakes of North America."

Seldom has the career of a great general begun so inauspiciously as did that of Frederick. The first major engagement was at Mollwitz (April 10, 1741). The Prussian cavalry was not then in the high state of efficiency which it later attained and a charge of the more numerous Austrian horse drove it off the field. The King was persuaded that the day was lost and spurred from the field-taking refuge in a mill. The Austrian cavalry now attacked the center, but the splendid Prussian infantry, under the veteran Marshal Schwerin, were not to be shaken by any cavalry in the world. Five times the gallant Austrians charged, and each time the rolling crash of the pelotonfeur drove them back. The Austrian infantry met with no more success than the cavalry and at last the marshal ordered the advance. In perfect formation, to the music of their bands, the Prussians swept forward, and the Austrians retreated, leaving nine guns behind them. The King, as Voltaire caustically remarked, "was covered with glory - and flour."

The war dragged on. There were secret treaties and separate peaces, invasions, retreats, and betray-



als. The Prussians won some notable victories—Chotusitz, Hohenfriedberg, and Kesselsdorf, all added to the prestige of their arms. More than that, they added Silesia permanently to the Prussian crown.

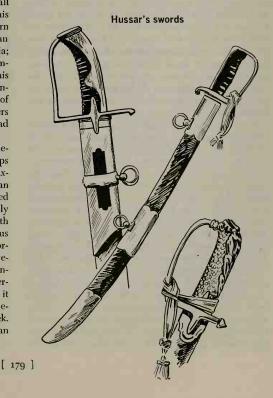
For eleven years (1745–1756) Prussia was at peace and Frederick was able to devote himself to the affairs of his country. Buildings and bridges were designed and constructed, marshes were drained, agriculture improved, manufacturies encouraged, the moribund Academy of Science revived and elementary education promoted. As might be expected the army received great attention. It was raised to 160,000 men, and at the outbreak of the Seven Years' War was by far the best trained and equipped force in the world.

This celebrated conflict, which was to see Prussia brought more than once to the verge of destruction, was a direct result of the role played by Frederick in the previous struggle. Maria Theresa had never forgiven the rape of Silesia; France, although the traditional enemy of Austria, was alarmed at the rise of Prussia (also, some of Frederick's cutting wit had been directed at Madame de Pompadour, then the real power behind the French throne). His caustic remarks had not spared Elizabeth, the Czarina of all the Russias either; "The Apostolic Hag" was one of his terms for her. Maria was to regain Silesia; in return for her help, France was to have the Austrian Netherlands; the Czarina would get East Prussia; Saxony was promised Magdeburg and Sweden, Pomerania. Thus Frederick faced a continent in arms, his only support being English ships and money, for England automatically allied herself with the foes of France. In fact, the fighting between the two powers overseas, in India, Canada, and the West Indies had rarely ceased.

The wily Frederick, not waiting until all his enemies were concentrated, struck first. Leaving troops to watch the Russians and Swedes he invaded Saxony, (August 1756) took Dresden, and defeated an Austrian army at Lobositz. Next spring he defeated them again, began to lay siege to Prague, and rashly attacked an Austrian army almost twice the strength of his own at Kolin. Here the King suffered a serious defeat - losing some 40 per cent of his army. An enormous concentration of manpower was now in movement to crush the Prussian upstart. The Russians invaded Prussia, and a small force briefly occupied Berlin, receiving 300,000 thalers as ransom to leave it unharmed. Meanwhile Frederick, by rapid movements, was attempting to hold his opponents in check. After much maneuvering he faced a Franco-Austrian force at Rossbach.

The French numbered about 30,000, and, individually, were far from equaling the fine troops who had marched to victory under Saxe. One of their officers unkindly said of them that they were "Assassins, fit only to be broken on the wheel," and predicted that they would take to their heels at the first shot. It is possible that the 11,000 Imperialists were not much better. Against this motley array, Frederick could muster only 21,000 men, but they were veterans and fighting under their King himself.

The battle at Rossbach (November 5, 1757), one of Frederick's most famous, was fought on an open plain, broken by a couple of rises, hardly worthy to be called hills. The Prussians were camped in front of these, when the Allies were seen to be moving their greatly superior forces in a movement designed to attack the King's army in flank and rear. The Prussian camp was instantly struck, and the cavalry, thirtyeight squadrons under Seydlitz, moved off under cover of the hills, followed by the infantry and artillery. The Allies, thinking these rapid movements indicated a Prussian retreat, pressed on in three parallel columns. The attackers, although they did not know it, were now themselves flanked. As the dense col-



umns neared the low hills, Seydlitz, whose squadrons were waiting on the other side, suddenly ordered his men up and over the crest. The startled cavalry who headed the columns had barely time to form when, "The whole of the Prussian cavalry advanced compact like a wall and at an incredible speed." After a sharp fight the squadrons of Allied horse were ridden over and driven off in rout. At the same time as their covering squadrons were dispersed, the crowded columns of infantry came under a fierce fire from the Prussian artillery, while seven battalions of Prussian infantry moved down to engage the leading regiments. The columns, their ranks ripped through by cannon fire and subjected to the rolling volleys of the Prussian infantry, recoiled in confusion. Unable to deploy, they were falling into disorder, when Seydlitz led his horsemen in a furious charge against their rear. The Allied troops broke and fled, with Seydlitz's troopers slashing at their backs. Allied losses were 7700, while the victors lost only 550.

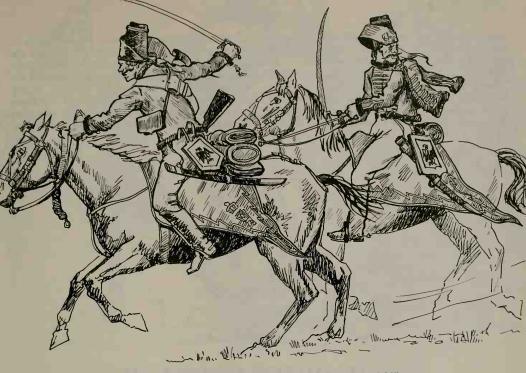
The battle shows Prussian drill and training at its best. The speed with which camp was struck and the columns formed (half an hour) and the swiftness with which the Prussians moved gave Frederick a great advantage. The superiority of the Prussian cavalry was evident. Not only were they victors in the initial combat, but their discipline was such that they were well in hand afterward, ready to deliver the decisive thrust. The well-served battery of eighteen heavy guns did much to break up the attempt of the columns to deploy and advance up the slopes, as did the rapidity and effectiveness of the fire of the seven infantry battalions (the only infantry engaged on the Prussian side).

A month later was fought the battle of Leuthen (December 5, 1757), another splendid example of Frederick's tactics, and of the skill and courage of the Prussian soldier. The odds at Leuthen were even more heavily against the King-33,000 to 82,000. The Austrians and Saxons held a line, overlong but strongly protected by obstacles, and with some two hundred guns, mostly light. Frederick's plan was to march across the face of the enemy army, and attack their left, meanwhile screening his movements with a small force which would also threaten the right. Accordingly the army marched in close formation toward the Austrian right, then, when under cover of a slight rise in the ground, veered to their own right, formed two columns, and moved swiftly across the Austrian front. The Austrians, who seem to have made little attempt to scout the Prussian movements, were still reinforcing their right against the expected blow when the Prussian columns, still maintaining perfect distance and alignment, appeared on their left and wheeled from column into line. Each battalion had brought up a 6-pounder, and a 10-gun battery of heavy siege guns had been dragged along with the attacking columns.

These guns now proceeded to blast away the abattis of felled tree trunks with which the Austrians had fortified their lines, while the battalions moved to the attack. The advance was in the oblique style made famous by Epaminondas, in this case the battalions were some fifty yards apart and staggered so that the right was nearer the enemy and the left refused. The attack rolled up the Austrian line from left to right. A stand by the Austrians in the village of Leuthen brought desperate fighting; Austrian reinforcements arrived from the right wing and an effort was made to change front and stabilize the line. So great was the mass of men that in places the defenders stood a hundred-men deep. Battalion after battalion of Prussians moved up to the assault, but it was not until the left (refused) battalions were brought up that the village was finally cleared. Aided by the fire of the heavy guns the advance continued. The commander of the Austrian left brought up the massed cavalry of that wing in an attempt to check the steady advance of the Prussian infantry. But forty squadrons of Prussian horse, charging from concealed ground, caught him in front, flank, and rear. The Austrians scattered and the triumphant cavalry attacked the rear of the enemy's infantry. As the day drew to a close the Austrians began to break and flee, pursued by the cavalry. Others threw down their arms and the whole army disintegrated. The Austrian casualties amounted to some 10,000 men with 21,000 captured, along with 116 guns, 51 colors, and thousands of supply wagons. As a follow-up to this victory, Breslau surrendered to Frederick two weeks later with another 17,000 men and 81 guns.

"The battle of Leuthen," Napoleon wrote, "is a masterpiece of movements, maneuvers, and resolution. Alone it is sufficient to immortalize Frederick, and place him in the rank of the greatest generals."

But the incessant campaigning was wearing away the Prussian army. Many of the best troops had fallen; at Prague and Kolin losses had been exceptionally heavy. Victories like Zorndorf (August 25, 1758) where the Prussians first experienced the tenacity and fighting spirit of the Russians, were costly. While at Kunersdorf (August 11, 1759) Frederick experienced a disastrous defeat, sustaining over 20,000 casualties (almost 50 per cent) and losing 178 guns. The morale and discipline of the Prussian troops was still excellent, but a large percentage of the men in the



Prussian Hussars-Time of Frederick the Great. Trooper and Officer

ranks were now recruits, or troops of enemy states, many of whom, upon surrendering, were taken wholesale into the Prussian service. Though welded into fighting units by the stern Prussian discipline, these were not the men who could wheel and march with parade ground precision under showers of case shot and musketry - nor could the blue-clad lines still deliver the even-spaced volleys of the pelotonfeur five times a minute. But discipline and esprit de corps and faith in their general made up in part for lack of training; and although desertion, that plague of all armies of the period, became a serious problem, the ranks were kept filled. More than that, the troops conscripts though many of them were - were still capable of making assaults as that at Torgau (November 3, 1760), marching against an entrenched enemy with some four hundred guns pouring case shot into them, until of six thousand grenadiers in one column only six hundred were left on their feet.

Nevertheless, so completely was the battle-wasted country drained of men that by the close of 1761, the Prussian army had dwindled to about 60,000 effectives. Complete disaster to the kingdom was only averted by the death of the Czarina, and the accession of her Germanophile successor, Peter III. This worthy not only offered immediate peace, but returned Pomerania to Frederick, and ordered a force of 18,000 men placed at his disposal. At this, Sweden also withdrew from the alliance. Saxony had been thoroughly beaten and overrun and Austria and France exhausted. Besides losing heavily on the battlefields of Europe, the latter had lost Canada and India. Peace was finally made in 1763.

Prussia was a wreck. It is said that four-fifths of all the men who had entered the army were casualties, and that in places over half the population perished. But never had a kingdom weathered such a storm and emerged victorious. Not all the might of Russia, France, Austria-Hungary, Sweden, and Saxony had been able to wrest from the Prussian King one acre of ground. With forces vastly inferior in number he had maintained an unequal struggle for seven long years. While suffering occasional defeats and setbacks, he had won many memorable victories. His fame

eclipsed that of any other general of his day, while the slavish copying by the world's military leaders of everything Prussian was but another proof of the reputation of the Prussian army and Prussian soldier.

Stolid and unimaginative that soldier may have been; lacking in initiative perhaps, and lost without a firm guiding hand. But he had the habit of obedience and the intestinal fortitude to attempt to carry out his orders, at any cost. Much has been made of the brutal Prussian system. Brutal it was, and the drill sergeants ruthless and efficient; but it was something more than fear of the lash which inspired the columns marching into battle at Leuthen, singing their old German hymns to the rattle of the drums and squealing of fifes, or sent the Prussian grenadiers time after time up the blood-soaked slopes at Torgau.



THE NAPOLEONIC WARS

The Armies of the Republic

THE LECEND of invincibility which had arisen around the splendid achievements of the Prussian Army was to be shattered in one afternoon, but before that army went down to defeat at Jena, the fortunes of war had brought the troops of another nation into the spotlight. The French soldier had proved his worth over the years, reflecting (as do all soldiers) in his discipline and efficiency the military virtues of his leaders. Under a Vicomte de Turenne he was magnificent; under a Prince de Soubise—there was a defeat like Rossbach. But in the years immediately following the Revolution there was a new spirit in the armies of France—a spirit which enabled raw levies to defeat the regular troops of half the countries of Europe. No matter that in many

cases they were led by men who shortly before had been corporals and sergeants in the royal army. They were men with a cause, burning with a desire not only to free their new France from the threat of invasion, but to spread the words Liberté, Égalité, and Fraternité throughout the world.

This did not all come about by one stroke of the pen. In fact, as in most revolutions, the immediate effect was to destroy discipline and morale. The army before the revolution had been formed as a voluntary long-service force, reinforced on occasion by drafts of militia. As in all such professional armies of the time, officers were drawn from the nobles or gentry, and the first results of the breakdown of authority was the flight of many such officers, while those sympathetic to the people's cause were, nevertheless, suspect, and their authority undermined. This affected the various corps in direct proportion to their social status; thus the unfashionable engineers were influenced least, the artillery next, then the infantry, while the

cavalry, officered by the cream of the nobility, suffered most.

The armies of the Legislation Assembly - still nominally loyal to the King-were commanded by Rochambeau, Lafayette, and Luckner. However, when the armies of the Austrians, Prussians, and Hessians were on the French frontiers, the extremists in Paris gained control, the Tuileries was stormed, and the Convention of 1791 abolished. Lafayette, a liberal but loyal to the conception of a constitutional monarchy, ordered two of his generals to march on Paris and liberate the King. One agreed but the second, Charles Dumouriez, refused. After some intrigue, Dumouriez was made commander of the north and Lafayette and many of his officers surrendered themselves to the Austrians. Luckner was replaced by General François Kellermann and his leading officers dismissed.

Thus at a crucial moment in her history, the armies of France were uncertain of their leaders and divided in their loyalties. Dumouriez was received by the troops with a sullen silence, and had to offer to fight one heckler, a challenge which did much to win over his men. "The Army," he wrote, "is in the most deplorable state . . . it has neither clothing, nor shoes, nor hats . . . and is short of many muskets." Nevertheless it had recovered its morale sufficiently to stand up against the Prussians at Valmy (September 20, 1792). The cautious Duke of Brunswick who headed the Allied army of Prussians, Austrians, Hessians, and émigrés refused to commit his troops to a pitched battle and the affair degenerated into a longrange artillery duel. The stand of the French, both regulars and national guard, at this almost bloodless "Cannonade of Valmy" convinced the Duke that he could make no headway against them, and the Allied army finally retired. It reveals much about the morale of the French troops, and nation, at this time that the victory - or rather, non-defeat - of Valmy should have been hailed as a turning-point in the country's history.

It was as well that the nation had had its spirits revived for there were dark days ahead. The execution of the King in January 1793 brought about the First Coalition against the Republic: Austria, Prussia, Spain, England, Holland, and Sardinia. Against the regulars of these nations the forces of the Revolution at first made but a poor showing. There was great difficulty in getting recruits; weapons and equipment were scarce; and the custom of guillotining unsuccessful generals stifled initiative and drove many, like Dumouriez, to seek safety with the enemy. Representatives of the government were assigned to the armies, much like the political commissars of a later revolu-



Infantryman of Revolutionary Period

tionary regime, with much the same purpose, and with similar effects on the morale of the officers. Discipline suffered, and officers who tried to enforce it were likely to be denounced to the leaders of the Terror. In April the Committee of Public Safety was formed and on August 23, 1793, it issued a memorable decree ordering universal conscription, the first since the days of Rome. The order has often been quoted, but the wording gives an indication of the extent of the national peril.

"The young men shall fight; the married men shall forge weapons and transport supplies; the women will make tents and serve in the hospitals; the children will make up old linen into lint; the old men will have themselves carried into the public squares to rouse the courage of the fighting men, and to preach hatred of kings and the unity of the Republic. The public buildings shall be turned into barracks, the public squares into munitions factories; the earthen floors of cellars shall be treated with lye to extract saltpetre. All suitable firearms shall be turned over to the troops; the interior shall be policed with fowling pieces and with cold steel. All saddle horses shall be seized for the cavalry; all draft horses not employed in cultivation will draw the artillery and supply wagons."

On that August day the whole conception of war changed. The long term professional army, the formalized strategy of previous centuries, with the accent on maneuver and siege rather than deliberate battle — was eventually to vanish. Its place would be taken by the nation in arms, and the emphasis would be on mass slaughter and total defeat. No more could a Saxe say, "I am not in favor of giving battle, especially at the outset of a war. I am even convinced that a clever general can wage war his whole life, without being compelled to do so."

The magnitude of the struggle had already brought conscription of a sort, and this, the volunteers of the National Guard, and the new levy raised the total of men under arms to an unprecedented number. Despite desertion and casualties, in January 1794, the new army totaled some 770,000. Such a host, hastily raised and sketchily equipped, could not be trained to the machine-like precision necessary to the Frederician tactics. There had long been a controversy in military circles between the advocates of column and line. The French drill book issued just prior to the Revolution had been a sensible compromise, by retaining the linear system, and at the same time gave an important place to the column of attack. It also increased the stately pace of the infantry from seventyfive paces a minute to a hundred.

But the linear tactics perfected by Frederick called for exact distances, intervals, and dressing, and rigorous musketry drill. The new levies, however enthusiastic, were incapable of such a performance, and in consequence, the ramrod-straight firing lines and the rolling volleys gave way to uneven swarms of skirmishers. Behind them came massed columns easy to form and to control - and which in many of the early battles were little more than huge mobs. These "horde tactics" were often successful, especially as the French usually outnumbered their opponents. The crowds of sharpshooters, taking advantage of whatever cover the ground afforded, presented a poor target to the mechanical volley fire, much of which was almost unaimed. On the other hand, the fire of the French was often effective against the motionless ranks. However, once they were committed, it was useless to attempt to control the movements of the swarms of sharpshooters and so in later years the columns, formations ideally suited for "green" troops, grew larger while the skirmishers were fewer. Thus the decision shifted from fire to shock.

No longer did the volleys of the advancing battalions so shatter the enemy that the final charge with the bayonet was merely "presenting the check for payment." The moving phalanx of the column was



Infantryman of Revolutionary Period

now the main weapon and the fire of the skirmishers was a preparation, not an end in itself.

One advantage the Revolutionary troops did have from the outset was speed and mobility. The quickstep of a hundred to a hundred and twenty paces a minute carried the French battalions along at a pace which seemed fantastic to their slow-stepping enemies, coupled with the fact that the French were not hampered by a large baggage train. They were not because they had no baggage, and while the Prussians and others moved with a vast quantity of impedimenta, which jammed the highways and necessitated much road-making and bridge building, the tattered armies of the Republic hurried along, destitute but speedy. The ability to cover ground has always been of prime military importance and most of the best fighting men of each era have possessed it. The French were no exception, and their prodigious marching was in many cases the key to victory. More than once it allowed their commanders to concentrate superior numbers at a given point - although heavily outnumbered in the whole area of operations.

Thanks to the reforms of Vaquette de Gribeauval (appointed inspector general of artillery in 1776) the French artillery was second to none. The field artillery was limited to 12-pounders, eights and fours. The

carriages were lightened and improved, limbers were introduced, and the gun teams were harnessed in pairs instead of single file. Six horses drew the 12-pounders and four, the eight-pounders and the fours.

Gribeauval also introduced such improvements as elevating screws, tangent sights, and made-up cartridges. This last, while not a new invention, was one which had not been universally adopted and, of course, gave a far higher rate of fire than when loose powder and ball was used.

The campaigns of 1793, '94, and '95 saw the French citizen-soldier gaining in confidence. There were defeats and setbacks and the troops suffered much from scanty supplies and equipment, but the enemy was no longer on French soil. The serious uprising in La Vendée, which had at one time occupied the attentions of three republican armies, was all but ended by the spring of '95, thus relieving the country of the threat of a spreading civil war.

Holland had been overrun by General Charles Pichegru, aided by the frosts of the terrible winter of 1794–95. The operation had been brought to a glorious climax by the capture of the Dutch fleet by a squadron of hussars, who rode over the frozen Texel and took the trapped warships and their crews.

Under Minister of War Lazare Carnot, the great organizer, the foundations of future victories were being laid. Not only did he himself direct operations, both at the front and in France, but he had an unerring eye for talent, and the list of men he recognized and advanced reads like the roster of the Empire's great. Ney, Bernadotte, Berthier, Augereau, Macdonald, and Bonaparte himself were all products of his system. Under the Jacobins, it was declared the armies of the republic had won:

"Twenty-seven victories, of which eight were pitched battles; 120 combats of minor importance; 80,000 enemies killed; 91,000 prisoners; 116 fortresses or strong towns taken, thirty-six of which had to be besieged or blockaded; 230 forts or redoubts captured; 3800 guns of various sizes; 70,000 muskets; 1900 tons of gun powder; 90 flags."

The army itself had been thoroughly reorganized. While many valuable men had been purged by the terror, either for the crime of being of noble descent, or for failing to beat disciplined regulars with mobs of half-starved conscripts, much deadwood had also been cut away. It is said that for one reason or another, between January 1792 and January 1795, 110 generals of division, 263 brigadiers, and 138 adjutant generals resigned or were removed. Promotion was now strictly by merit, whereas in the opposing armies,

seniority had automatically pushed many doddering



old fools into positions they were unfit to occupy.

The stage was now set for the "campaigns of liberation"—the carrying of the torch of liberty to the oppressed throughout Europe. But anxious as the Directory was to see the revolutionary gospel spread beyond the Rhine and the Alps there was also the pressing need for the armies of liberty to find food.

For France, so recently torn with war and revolution, could no longer find subsistence for her armies. The troops were in pitiful shape—many barefoot and in rags, and many more without arms. The cavalry horses were racks of bones, even generals were halfstarved and when generals go hungry, the ranks are poorly nourished indeed. Both the government and the generals were frank about the situation—and its only remedy.

"Soldiers," Bonaparte told his half-mutinous troops. "You are famished and nearly naked. The Government owes you much; it can give you nothing. Your patience, the courage you exhibit among these crags, are splendid, but they bring you no glory; not a ray is reflected upon you. I will lead you into the most fertile plains of the world. Rich provinces, great towns, will be in your power; there you will find honor, glory and riches. Soldiers of the Army of Italy, will you be found lacking in honor, courage, or constancy?"

Unfortunately, therefore, the French "liberated" not only the peoples of the invaded countries, but everything that they possessed. It was more as a swarm of locust than saviors that they descended on the "fertile plains" and it was not long before the outraged inhabitants began to retaliate. Soldiers in those days were notoriously light fingered, but the French, with the rapacity characteristic of the nation, seem to have turned looting into a fine art, combining the efficiency of the military machine with a natural eye for the rare and the beautiful. Small wonder that the population of the areas in which the French operated almost invariably turned against their liberators.

This capacity for arousing the hatred of the inhabitants of the invaded territories was to have serious effects on the campaigns of the future, as well as sowing the seeds of national hatreds and desire for revenge which would long outlast the Napoleonic Wars. It was of particular import in Spain, where a guerrilla warfare was carried on with great bitterness and ferocity. So effective did this war become (any dispatch riders not escorted by at least half a regiment were sure to fall into the hands of the Spanish, and convoys of supplies had to guarded by small armies) that it greatly influenced the outcome of the Peninsular War itself. It was one of Napoleon's blind spots that he did not fully recognize and use the great impact of the revolution on the European masses many of whom still existed in a feudal society. As it was, despite the behavior of the victors, the promise of freedom and equal opportunity was sufficient to bring thousands of Germans, Poles, and Italians into the French ranks.

The Empire

The history of the wars of the Republic and the Empire cover twenty-three years of almost continual fighting. The swift rise of Napoleon Bonaparte, from a Corsican lieutenant of artillery to the Emperor of the French - one of the world's great success stories - is of interest here only in its effect on the French army and the fighting men of what was to become one of the most efficient and victorious military machines in history. It is also an example of the impact on men's minds of an overwhelming personality, of a genius who combined all the requisites of a great captain with the ability of a statesman, lawmaker, and organizer. For one of Napoleon's greatest assets was the almost hypnotic power which he held over his men. That he actually cared anything for them is to be doubted. He sacrificed them by the tens of thousands, starved them, marched them until their feet were bloody, and on at least two occasions, in Egypt and Russia, left them to weather defeat as best they might. Yet he could dazzle them and win them by the judicious use of material rewards - splendid uniforms, decorations, promotions, and the like; while in more subtle ways - the remembered name of some veteran hussar; the tweaked ear of a grizzled grenadier - he succeeded in creating in his soldiers an enthusiasm which was akin to worship.

This deifying of a general is not essential to victory—the British veterans of the Peninsular War certainly did not worship the Duke of Wellington (while he more than once expressed his opinion of them in no uncertain terms) but it is an important factor, and one which must be taken into consideration in evaluating the fighting spirit of the soldiers of the Empire. Perhaps even more important was the long series of magnificent triumphs. In the minds of his men the very presence of the Emperor on the field spelled victory, and when at last his star was in the descendant the spell he had woven was still too strong to break. Even the Duke conceded that his great rival's presence was worth 40,000 men.

The following from the contemporary French historian Lamartine, written of the French at Waterloo, gives an idea of the tremendous hold of the Emperor on the armies of France.

"... the army was Napoleon! Never before was it so entirely Napoleon as now. He was repudiated by Europe, and his army had adopted him with idolatry; it voluntarily made itself the great martyr of his glory.



At such a moment he must have felt himself more than a man, more than a sovereign. His subjects only bowed to his power, Europe to his genius; but his army bent in homage to the past, the present and the future, and welcomed victory or defeat, the throne or death with its chief. It was determined on everything even on the sacrifice of itself, to restore him his Empire, or to render his last fall illustrious."

Since the earliest organized warfare, men have rallied to some sign; a banner, or a religions symbol yak-tails or a cross. But of all the standards under which soldiers have fought and died, the two which come first to mind are the Eagles of Rome and the

Eagles of Napoleon.

The Emperor supervised the design of his Eagles with his usual attention to detail. It was no coincidence that he chose as the battle-standard of his armies the thunderbolt-grasping bird of the legions of Imperial Rome, for, over the centuries, their name still evoked the memory of an Empire which encompassed most of the known world. The Eagle itself was to be the symbol, the flag was of secondary importance. The bird was of copper, gilded, and measured eight inches from head to foot, and nine and one half inches from wing-tip to wing-tip. Below the thun-

derbolt was a brass tablet—three inches square, on which was the regimental number, in raised letters. The whole weighed three and a half pounds. The stout oaken staff was eight feet long, and the silken regimental colors were 35 inches along the staff and 33 inches on the fly.

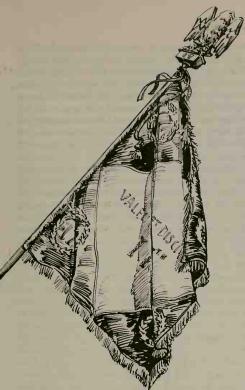
The design of the flags and their inscriptions and embellishments was changed from time to time, those carried at Waterloo being the vertical bands of the national flag, edged in gold. On the white central panel was lettered in gold the inscription Empire Français, and below L'infanterie des Français au-Regiment d'infanterie de Ligne or whatever the corps happened to be. On the reverse was the motto Valeur et Discipline and the battle honors of the regiment.

The first distribution of Eagles was in December 1804 at a great ceremony in which detachments from every corps and every ship of the line - over 80,000 men-were present. Over a thousand Eagles were distributed, one to each battalion of infantry and squadron of horse. But Napoleon was quick to see the danger of having too many Eagles. If lost in battle, the effect on the morale of the troops was bad, and, conversely, the enemy made a great show of any captured trophies. This was poor propaganda, and shortly after the opening of the campaign of 1805, all light cavalry (hussars and chasseurs) Eagles were ordered returned to France. Later this was applied to the dragoon regiments, and to those of the light infantry. In all these corps, by the nature of their duty, the Eagles were unduly exposed to isolation and capture.

In the reorganization of the Grand Army in 1808, there was but one Regimental Eagle, carried by the first battalion. The other battalions carried small pennon-shaped flags of serge, of a different color for each battalion, and marked simply with the battalion number. As a further prevention against loss, infantry regiments which had been reduced to less than a thousand men and cavalry to less than five hundred had to exchange their Eagles for a standard without the Eagle.

The Eagle was in the care of a commissioned officer, a veteran senior lieutenant of fine record, and two picked veterans, men who could neither read nor write, so that their only hope of promotion was by some act of special devotion and bravery. In 1813, two more enlisted men were added to the ranks of the Porte-Aigles.

A corps which lost its Eagle was in disgrace, and a new one was not presented until it had earned it by some outstanding deed of valor, or delivered an



Imperial Eagle. Flag in its original form. The flag was of secondary account, an adornment for the all important Eagle

enemy standard to the Emperor. Likewise, in the later years, newly raised regiments of conscripts had to earn the right to the coveted symbol on the field of battle.

As famous as the Eagles were the numerous battalions and squadrons of the Imperial Guard. Of these the veterans of the Old Guard were the elite. The Guard was recruited from the pick of the line regiments and an appointment to the corps was a coveted honor. There was great competition—every colonel kept a waiting list—and after every battle the names of those who had particularly distinguished themselves were put down. Besides great prestige and more pay, the Guard was, when not on campaign, stationed in Paris—an inducement in itself. Napoleon was as careful of the lives of his Old Guard as a miser of his gold. They were invariably held in reserve and never committed until the crises of the battle was at hand. Then, in perfect order, they majestically ad-

vanced, to sweep from the field an enemy half-beaten already by the weight of their reputation.

The awe-inspiring march of their columns, which decided the issue on so many blood-soaked battle-fields was seen for the last time at Waterloo. And when they, like so many before them, broke back before the deadly fire and the glittering bayonets of the dull red line—la ligne rouge sombre, the news of their defeat spread like the word of doom. Cries of "La garde recule" echoed across the trampled grain,



and men who, until that moment, still believed in ultimate victory knew that the day was lost. But all the Guard had not been committed, and three battalion squares, which Napoleon had thrown across the line of retreat, stood their ground nobly until ordered to retire. Reduced from three ranks to two, they made their last stand on the plateau of La Belle Alliance. It was here that Le Comte Cambronne, their commander, gave the classic answer to a demand for surrender—not the somewhat theatrical "La garde meurt, mais ne se rends pas," as so often reported, but a more soldier-like, "Merdel"

The veterans of the Guard won much glory, but there was plenty to spare for the rest of the Grand Army. Their deeds still loom large in history, although a century and a half has rolled by since their idol sailed into exile. The blue coatees of the infantry, the gleaming armor and plumed helmets of the cuirassiers, the Imperial blue jackets and brass breastplates and helmets of the carabinieri - their colors were seen through the powder smoke of some of the most famous battles of yesterday. Austerlitz, Jena, Eylau, Friedland, their names still ring with the glory of the Eagles. Victory was in the air in those days and there seemed no limit to the Empire. But limit there was, and soon names like Borodino and Beresina, Lutzen and Leipzig were heard. And finally, inevitably, the names in the dispatches were no longer foreign names but French; names like Montmirail, Champaubert, Montereau, and Laon.

And as the names changed so did the men. One of Napoleon's first acts as First Consul was to enforce the conscription, which henceforth provided a minimum of 60,000 young recruits each year. The peak year, 1805, saw 210,000 join the colors. But, as the number of men in the armies increased, and as the Emperor's appetite for power and his belief in his destiny grew, his style of war changed. Where before he had sought decision by maneuver, now there was an increasing tendency to hurl masses of men directly at the enemy, regardless of losses. "I can use 25,000 men a month," he once said, but 300,000 men a year, even when he bolstered his armies with men of his subject allies, Germans, Italians, Dutchmen, and Poles, was too great a drain on the French nation. In the earlier years the youth of the nation marched gaily forth to glory, and the lure of loot and victory kept many in the ranks. But the bones of his veterans lay strewed from the banks of the Moskva to the mountains of Spain, and as the years went by, the nation grew tired of glory. At the last the dread conscription hung like a cloud over the land, and when the grim campaigns of 1814 began, the troops who tried so valiantly

to defend French soil were many of them schoolboys or grandfathers. The French had been proud enough of the nation's triumphs; cheered the returning victors and viewed with satisfaction the captured trophies. Now as the slaughter continued, the loss of the flower of the country's manhood seemed a high price to pay for some tattered standards and battered cannon; and soon many who had idolized the Emperor came to helieve him a Moloch, stoking his insatiable fires with the bodies of their children.

The reluctance to serve (by 1810 the percentage of those evading the drafts was estimated at eighty) had its effect on the efficiency of the French forces. By 1812, the armies were a conglomeration of veterans and conscripts both French and foreign. Of the 363,000 men who crossed into Russia in the summer



Lancer of the Regiment of the Vistula (Polish, in the French service)

of 1812, only one-third were French and, as the tide of war turned against the Emperor, the foreigners tended not only to desert singly, but in groups. Thus at Leipzig the whole Saxon contingent deserted en masse. Obviously, troops of this caliber were not about to make any great effort for the Emperor. In contrast to the comparatively poor material of 1813 and 1814, the relatively small army which Napoleon led at Waterloo was made up of almost entirely of veterans, returned from hospitals and prison camps, and from garrison duties throughout the conquered territories.

Splendid as were the veterans of the Grand Army, their victories were, in the main, the work of Napoleon alone. The margin of victory was, in many cases, too slim to credit the French fighting man with any great superiority. The furious fighting at Aspern, Napoleon's first major defeat, showed that the whitecoated Austrians had lost none of their valor, while blood-baths like Eylau reminded the West that there were few more stubborn or ferocious warriors than the Russian peasant. And as the war grew in scope and savagery, the disadvantages of a military system in which one overpowering genius held the reins became more and more apparent. The new mass warfare was too big for any one man, even Napoleon. Yet there was no one to take his place. He was too dominant a figure for others to flourish in his shade consequently when he was present, and in good health and spirits, all went well. In his absence, or when the eares of administering an Empire as well as an army interfered with his judgment, things often went very badly indeed.

The British Redcoat

For years after Marengo and Austerlitz and Jena, the moral ascendancy won by the French was a factor on the battlefield. It possibly affected the Austrians most, the Prussians and Germans next, the Russians least, and the British, not at all. But as the war went on, the troops of the Allies gained confidence and their generals, experience. As the news of the French defeats in Spain spread, and as the tattered frost-bitten remnants of the Grand Army staggered back into Germany, the legend of French invincibility suffered damaging blows, and only the egomaniac at Fontainebleau could fail to see the handwriting on the wall.

Compared to the great and continued efforts put

forward by the continental powers, the military contribution made by Britain seems small indeed. Her great power was on the sea, in "Those far-distant, storm-beaten ships, upon which the Grand Army never looked." Time and again her fleets thwarted the Corsiean, but a superior naval power may confine and harass a great land power—it cannot defeat it. That can only be done in the field—and at the outbreak of the Wars of the Revolution the strength of the British Army stood 17,000 men. It was rapidly augmented, but by the end of the war only numbered around 250,000—of which strong forces were scattered from India and the East Indies to the Cape and the Caribbean. In contrast the navy in 1814 numbered 594 ships, manned by some 140,000 seamen and marrines

In addition the numerous threats of invasion brought forth an active volunteer movement which at one time reached a peak of 380,000. These organizations were raised, uniformed, armed, and equipped by voluntary contributions, and many volunteered from their ranks into the regular army.

Like any other, the British Army contained its share of tough characters, jail birds, and the like, but on the whole, its quality was high, especially during the latter part of the Napoleonic Wars, when many men of good character and some education volunteered out of sincere patriotic motives. Wellington, who was notoriously eaustic about the men under his command, referred to them as blackguards, scum of the earth, etc. "There is no crime recorded in the Newgate Calender that is not committed by these soldiers, who quit their ranks in search of plunder," he wrote. This was hardly fair to the better element, but the Duke's bark was, at times, worse than his bite, and he could also write of his army that, "it is probably the most complete machine for its numbers now existing in Europe." The crusty Duke was no less rigorous in his comments on his officers, and the recipient of a tongue-lashing from "The Peer" was likely to be left a much shaken and chastened man. One such unfortunate was so disturbed as to put a bullet through his head. "There is nothing on earth so stupid as a gallant officer," the Duke wrote, and Napoleon, who once said of Ney that there was no drummer in his army who knew less of strategy, would have agreed.

The clash between the two armies was not only the clash between two racial characteristics—the élan of the French and the stolidity of the British—but between two radically different tactical systems. For the British had retained the linear formation of Frederick, but without the rigidity which had crept into the overformalized Prussian system in after years.

Their musketry, while not as rapid, was better aimed, and therefore far deadlier, and was to become dreaded as the most effective in Europe.

The following, by General Maximilian Foy who served in Napoleon's armies in Spain, describes the

French system of attack:

"The action was opened by a cloud of skirmishers, on foot and mounted. . . . They harried the enemy, escaped from his masses by their speed, and from the effect of his guns by their scattered order. They were reinforced so that their fire should not die out, and they were relieved to give them more efficacy. The mounted artillery rode up at a gallop, firing grape and canister at point-blank range. The line of battle moved in the direction of the impulse given; the infantry in column, for it did not depend on fire, and the cavalry units mingled so as to be disposable everywhere and for everything. When the rain of enemy bullets began to thicken, the columns took to the double-quick with the bayonet, the drums beating the charge and the air reverberating with cries, a thousand times repeated. 'Forward! Forward!'"

The Napoleonic tactic, so successful at Friedland, relied on "fixing" the enemy's line by incessant attacks and then bringing to bear an overwhelming force of artillery at the spot chosen for the breakthrough. The guns were moved up to close range (the short range of the musket allowed this) and the opposing ranks were literally blown away with case shot.

Napoleon's reliance on such artillery "preparation" is shown in his dictum that, "Once the mêlée has begun, the man who is clever enough to bring up an unexpected force of artillery, without the enemy knowing it, is sure to carry the day." But while this was deadly against troops massed in close formation, it was ineffective against troops when drawn up in the classic Wellingtonian position. For, instead of exposing themselves to the full fury of the French artillery storm, the British, where possible, were posted on the reverse slope of a rise. Upon the advance of the French column the skirmishers were called in, and the British infantry, two-deep, stepped forward and quietly awaited the order to fire.

This conflict between French column and British line was almost invariably decided in favor of the latter. The swarms of French *tirailleurs* was met and counteracted by the fire of the light companies of each battalion, or by detached companies of riflemen.

Of the French tactics, Wellington remarked, "They have, it seems, a new system of strategy which had outmaneuvered and overwhelmed all the armies of Europe . . . They may overwhelm me, but I don't think they will outmaneuver me. First, because I am

not afraid of them, as everyone else seems to be; and secondly, if what I hear of their system of maneuvers be true, I think it a false one as against steady troops. I suspect all the continental armies were more than half beaten before the battle was begun."

That the British were unimpressed by the reputation of the Grand Army was first shown at Maida (July 4, 1806). This unimportant combat on the Italian mainland was notable only in that a superior French force was routed, with ten-to-one losses—an musual occurrence at that date. The crack First Léger, which charged the British light companies, was met with the bayonet, but shrank from the actual contact (although some bayonets are said to have crossed), broke and fled—setting a pattern which was to be repeated on many fields until finally the veterans of the Guard suffered the same fate at Waterloo.

Unfortunately, while of excellent quality, the British forces in the field were always small, and their leaders were constantly reminded of the need to husband their men. Wellington once wistfully remarked: "I can lick those fellows any day, but it would cost me 10,000 men, and, as this is the last army England has, we must take care of it." A French marshal is quoted as saying, "The British infantry are the best in the world. Fortunately there are not many of them."

The British cavalry, what there was of it, was excellent—good horsemen on splendid horses, and officered by hell-raising gentry, who rode at the French the way they would have ridden at a fence in the hunting field. Their fault was that they were too impetuous, and the Duke was often to complain that, while individually they were superior to the French, they were lacking in discipline. This hell-for-leather attitude was to have dire results at Waterloo, when the all-out charges of both the Union and the Household Brigades were to result in the reduction of both to mere skeletons.

The artillery in the British service had long been famous and in the Napoleonic wars it was brought to a high state of efficiency. Horse artillery had been introduced in 1793, and the driver corps in 1794, thus doing away with the hired civilian carters of earlier years. The assigning of guns to battalions was done away with in 1802 and the guns were grouped in "brigades" of six pieces (five guns and one howitzer). Horse artillery groups were called "troops."

A new missile was developed by the British artillery and named after its inventor, Lieutenant Henry Shrapnel. It made its debut on the battlefield at Vimiera in 1808. It consisted of a spherical fused shell and contained musket balls and a bursting charge sufficient to rupture the walls of the shell. When the

case burst, at a predetermined distance over and in front of the target, the musket balls continued on, spreading in a cone. Crude fuses and the small size inherent in a shell of spherical shape limited the effectiveness of the new projectile but nevertheless its impact on the French, both moral and physical, was considerable.

It was the British infantryman, however, who was held in the highest esteem. To the quiet confidence that he was more than equal to any number of foreigners was added the knowledge that he was better armed and equipped, better led, and, on the whole, better fed than his opponent. In addition he was better trained in a more flexible system, and speedily acquired the reputation (of great moral value) of being the most dangerous marksmen in Europe. In the days when 70–80 yards was considered maximum effective range of the smoothbore musket, this reputation rested on the ability to coolly hold his fire until the enemy was within 50 yards, and then to deliver rapid, aimed volleys.

'The English," wrote the French Marshal Bugeaud de la Piconnerie, "generally occupied well chosen defensive positions having a certain command, and they showed only a portion of their forces. The usual artillery action first took place. Soon, in great haste, without studying the position, without taking time to examine if there were means to make a flank attack, we marched straight on, taking the bull by the horns. About 1000 yards from the English line the men became excited, spoke to one another and hurried their march; the column began to be a little confused. The English remained quite silent with ordered arms, and from their steadiness appeared to be a long red wall. This steadiness invariably produced an effect on the young soldiers. Very soon we got near, shouting, 'Vive l'Empereur! en avant! à la baionnette! Shakos were raised on the muzzles of the muskets; the column began to double, the ranks got into confusion, the agitation produced a tumult; shots were fired as we advanced. The English line remained silent, still and immovable, with ordered arms, even when we were only 300 yards distant, and it appeared to ignore the storm about to break. The contrast was striking; in our inmost thought each felt that the enemy was a long time in firing, and this fire, reserved for so long, would be very unpleasant when it did come. Our ardour cooled. The moral power of steadiness, which nothing shakes (even if it is only appearance), over disorder which stupefies itself with noise, overcame our minds. At this moment of intense excitement, the English wall shouldered arms; an indescribable feeling rooted many of our men to the spot; they began to

fire. The enemy's steady concentrated volleys swept our ranks; decimated, we turned round seeking to recover our equilibrium; then three deafening cheers broke the silence of our opponents; at the third they were on us, pushing our disorganised flight."

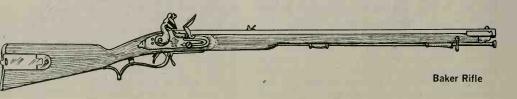
Many marshals of France—Ney, Messena, Soult, Junot, Victer, Jourdain, Marmont—had learned to their cost the fighting ability of the imperturbable British soldier. Napoleon himself estimated that, "a French soldier would not be equal to more than one English soldier, but he would not be afraid to meet two Dutchmen, Prussians, or soldiers of the Confederation." However, on the morning of Waterloo, the warnings of his generals with Peninsular experience as to the difficulty of dislodging British infantry by frontal attacks only served to arouse the Imperial ire. Like his marshals, he could only learn the hard way.

The average redcoat was highly respected by his French opponents, but the cream of the British Army were the troops of the famed Light Brigade (not to be confused with the cavalry brigade of Crimean days). The need for special companies of light troops, for screening and reconnaissance work had been felt as far back as the French and Indian wars. It became increasingly pressing during the American Revolution and the fighting in the West Indies, and more so with the advent of the swarms of French tirailleurs of the Revolutionary armies. In answer to this demand, an experimental rifle corps was formed in 1800 from drafts from fourteen regiments. It was trained by two brilliant officers, and, after seeing service at Ferrol and at Copenhagen in 1800 and 1801 was made into the 95th Regiment of the Line. It received dark green uniforms, black buttons and badges, and more important, the first rifle issued to the British Army. This was the Baker, a comparatively short weapon, firing balls of twenty to the pound, and, according to its maker, capable of hitting a man at two hundred yards. I own one of these old rifles, in as perfect condition as when it left the armory, and even using the utmost care in patching and loading I should not care to guarantee a hit at anything over 150 yards. However, this is double the effective range of the musket, and in the capable hands of the greenclad riflemen of the 95th the weapon did good service in Spain and at Waterloo.

The 95th was brigaded with the 52nd and the 43rd Foot (both reorganized as light infantry) and placed under the command of Sir John Moore. Moore, one of the finest soldiers England ever produced, proceeded to make the brigade the mirror of all that he thought a soldier should be. For the mechanical drill and parade exercises, bullied and flogged into the



British Light Infantryman and Rifleman of the 95th



men until they became mere military robots, he substituted a system of training based on the premise that the soldier was a human being, capable of reacting to intelligent treatment with intelligent responses. War, he believed, called for the fullest development of the soldier's mental, moral, and physical powers. Discipline he insisted on, but the soldier was to be taught to think for himself, as well as to obey orders. This combination of individual reasoning and absolute obedience, the "thinking fighting man," is difficult to achieve even now. It was doubly so in Moore's time when the average intelligence of the man in the ranks was at a very low level, when hard drinking was the order of the day and when, in all too many cases, the average officer purchased his commission and then settled down to a lifetime of boozing and gambling, his daily contact with the men under his command consisting of a couple of hours shouting and bullying on the parade ground.

Despite his addiction to the bottle and his dismal ignorance of most things military, the average young British gentleman of those days made a better officer than might be supposed. He was a product of his time and social class, which meant that he had been taught to ignore bodily discomfort, was physically strong, as fearless as any man on earth, and, while caste-bound and arrogant, was accustomed from birth to dealing with the lower classes on easy and familiar terms. His native intelligence admitted of his learning his trade and profiting by his mistakes, while his rigid code of honor and sense of fair play was of great value in his relations with his men. Strangely enough, the inequitable system of purchase, and of promotion by influence, which saw colonels of twenty-six and soured and grizzled captains of fifty, seems not only to have been accepted without undue rancor, but also to have worked fairly well in practice. Wellington himself was a good example of advancement by family influence. An ensign at eighteen, he was a captain at twenty-two, lieutenant colonel at twentyfour, colonel at twenty-seven, a major general at thirty-three, a lieutenant general at thirty-nine, general at 42, and at 44, field marshal.

Moore took the unusual step of seeing that his officers first learned what they had to teach. Captain William Hay in his *Reminiscenses* recalls that, upon joining the 52nd in 1808 at the age of sixteen: "I, with the other youngsters, was handed over to the adjutant for drill, it being the rule of the regiment that all young officers must be drilled for six months in the ranks with the men before being allowed to do duty as an officer. These drills consisted of five hours each day, besides morning and evening parades . . ."

Besides drilling with them, the officers were encouraged to study their men with the view of best utilizing any special aptitudes. Physical recreation was encouraged, and much training took the form of field exercises under war conditions. Where possible, crime was prevented rather than punished, and rewards, medals, badges, and promotions were used as inducements for good behavior, rather than fear of the lash. "The 52nd is at this moment indisputably one of the first corps in the Service in every respect. The cat-o'-nine-tails is never used, and yet discipline is there seen in the highest state of perfection."

Last but not least, the soldier of the Light Brigade was taught to be able to look after himself—to sew, cook, and in general prepare for a day when he might be thrown on his own resources in a hostile country. In essence the Light Brigade was given the Commando training of World War II, and to modern admirers of Sir John, it was not surprising to see his ideas revived 130 years later.

Moore was to die at Corunna - buried "darkly at dead of night" but the troops he drilled and the system of training he inaugurated lived on in the Light Brigade, later expanded into the Light Division. Under the stern but wise discipline of fiery "Black Bob" Craufurd they became the mainstay of the Peninsular Army. First in advance, last in retreat, they were famous for their ability to fight intelligently under all conditions; for their self-sufficiency, which enabled them to survive in a forbidding and inhospitable land; and for their splendid march discipline, which could take them, already weary, to the field of Talavera - over sixty-two miles in twenty-six hours. (Though the march was made in the heat of a Spanish summer, and carrying fifty to sixty pounds of equipment, only seventeen fell out of the ranks.) Nor were they trained as mere skirmishers. At Fuentes de Onoro their steady fighting withdrawal in line of battalion squares won admiration, their assault on the breach at Ciudad Rodrigo, where Craufurd himself fell, covered them with glory, and the even bloodier storming of Badajoz saw one-third of the division casualties.

Such were the troops who hustled the French out of Spain and into France; and it was fitting that on that fifteenth day of June in 1815, the gallant 52nd should have given the *coup de grâce* to the final charge of the Chasseurs of the Guard.

Cavalry was used in masses in those days, and especially by the French (the great charge through the falling snow at Eylau in East Prussia was made by 14,000 cuirassiers, carabinieri, hussars, and chasseurs). The infantry squares so frequently mentioned



in accounts of the Napoleonic Wars were formed as a defensive measure against such cavalry attacks. Individually or in scattered groups, men on foot were no match for mounted men. The thundering approach of a body of horse was usually sufficient to intimidate the bravest, and large bodies of foot were often routed by the mere threat of a charge by horsemen.

If infantry were attacked while in column of march, or from the flank while in line, they were certain to be ridden down and cut to pieces, with little chance of inflicting any loss on their attackers. The losses suffered by bodies of men in such formations were often enormous and out of all proportion to the numbers of the attacking cavalry. During the Peninsular War, six squadrons of Suchet's cavalry rode down and dispersed a whole division of Spanish infantry, whom they surprised while forming line of battle from column of march (had three squadrons of Spanish cavalry and a half battery of artillery done their duty

instead of bolting the catastrophe might have been averted). As it was, a few hundred horsemen completely routed a force of some four thousand men.

The redoubtable British infantry were not immune to such disasters. Due to the recklessness of the divisional general, the three battalions of Colborn's brigade at Albuera were deployed in line with unprotected flanks and no supports within a half mile. They were caught in flank by two regiments of French cavalry, rolled up, and in a few minutes, lost 1200 men out of 1600, along with five colors.

From the earliest days to the introduction of the rifled musket and the breechloader, the infantryman's one recourse when threatened by cavalry was to mass in groups, presenting a ring of weapons to the enemy. The squares of Waterloo were direct descendants of the "hedgehogs" of spears of feudal warfare. To the bristling hedge of steel had been added the fire-power (such as it was) of the flintlock musket. The renown gained by the steadiness of the British squares at Waterloo and the importance historians have rightly given to their share in the victory may have given the impression that it was a tactic peculiar to the British Army. It was, however, a formation in common use in all armies of the period, and veteran troops in hollow square were considered safe from cavalry.

"The best cavalry is contemptible to a steady and well-supplied infantry regiment; even our men saw this, and began to pity the useless perseverance of their assailants, and, as they advanced, would growl out, 'Here come these fools again!'

In only one case in the Peninsular was a properly formed and unshaken square broken. On the morning after Salamanca, two French battalions were drawn up in square, each formation in a good position on open ground on a gentle slope. Here they were charged by heavy dragoons of the King's German Legion, in what French General Foy called the best cavalry charge he had ever seen. French volleys caused many casualties among the troopers and the attack would probably have been beaten off, but a mortally wounded horse, carrying a dead dragoon in the saddle, leaped straight onto the kneeling French infantrymen in the front rank. Kicking and struggling in its death agonies, it knocked down half a dozen men, making a gap through which an officer instantly spurred, followed by a wedge of troopers. The formation once shattered, the square broke up, most of the men throwing down their arms.

The men of the second square, shaken by the sight of the destruction of their sister-battalion, wavered. The fire which met the oncoming dragoons was wild, the face of the square caved in and broke, and in a moment all was over.

That, until the moment it was entered, the first square defended itself well is shown by the fact that the attacking dragoons lost fifty-four killed and sixty-two wounded out of seven hundred.

Speaking of the square formation, Tomkinson, who was present (he was an officer in Vandaleur's Brigade of Dragoons) at Quatre Bras, wrote of a regiment of British infantry there:

"They were attacked very suddenly, and had to form in square without loss of time in the standing corn. The enemy attacked most gallantly, but were received so coolly, and in such order, that it was impossible to succeed unless they had ridden the square down by main force (a thing never heard of; the infantry either break before the cavalry came close up, or they drive them back with their fire). It is an awful thing for infantry to see a body of cavalry riding at them full gallop - the men in the square frequently begin to shuffle and so create some unsteadiness. This causes them to neglect their fire. The cavalry seeing them waver, have an inducement for riding close up, and in all probability succeed in getting into the square, when all is over. When once broken, the infantry, of course, have no chance. If steady, it is almost impossible to succeed against infantry; yet I should always be cautious, if in command of infantry attacked by cavalry, having seen the best of troops more afraid of cavalry than anything else."

A horse cannot normally be brought to charge a wall of bayonets backed by lines of shouting men. If it can be brought to approach such a barrier at all it will invariably refuse at the last moment, and many a horseman, with more daring, but perhaps less sense, than his mount, was spilled head foremost onto the waiting steel. At Waterloo the French troopers made every effort to force their way into the British formations

"Part of the squadron in retreat, but the more daring remained backing their horses to force them on our bayonets.

"The next charge the cavalry made, they deliberately walked their horses up to the bayonet point; and one of them, leaning over his horse, made a thrust at me with his sword. I could not avoid it [the writer was in the front rank, kneeling, musket at an angle, butt to ground and braced under right knee] and involuntarily closed my eyes. When I opened them again, my enemy was lying just in front of me, within reach. In the act of thrusting at me he had been wounded by one of my rear rank men . . .

"But though the enemy did not flinch, on the other



French Dragoon (Mounted) and Hussar

hand few actually collided with the squares of bristling bayonets . . . Individuals rode up to our men and strove to knock aside the bayonets. But the only result was that their bodies and those of their borses soon formed ramparts round the squares.

"I am at a loss which to admire most, the cool intripid courage of our squares, exposed as they often were to a destructive fire from the French artillery and at the same time or in less than a minute surrounded on all sides by the enemy's heavy cavalry, who would ride up to the very muzzles of our men's firelocks and cut at them in the squares. But this was of no use, not a single square could they brake, but was always put to the rout, by the steady fire of our troopes."

If the cavalry could not force their way in they were more or less helpless and could only ride around the square in fury and frustration.

Wrote the Duke of Wellington: "We had the French cavalry walking about us for some time as if they had been our own."

That the horsemen swarming round the squares

were not annihilated in short order was due to the inaccuracy of the smoothbore muskets. As it was, the attackers almost invaribly suffered heavy losses.

Squares were usually formed with the men four deep, the front ranks kneeling. The standard front for a file in the British service was twenty-one inches, and thus a battalion of eight hundred bayonets would form a square with faces some thirty yards long. After a campaign was well under way, few battalions would be anywhere near that strength, and the squares shrank accordingly. If battalions fell too far below strength, two weak ones might be brigaded together to form one square. A battalion of the size mentioned above could form from line to square in some forty-five seconds. As cavalry at the gallop could cover one hundred yards in about fifteen seconds, this did not leave much margin for safety, and often battalions were surprised and ridden down before their formation was complete.

With veteran troops squares were maneuverable, as witness the orderly retreat from the battlefield of Waterloo of those of the Imperial Guard. At Fuentes de Onoro the famous Light Division formed in squares, three British and two Portuguese, and carried out a leisurely retreat over a distance of two miles; fighting off two brigades of French cavalry, with the loss of only one killed and thirty-four wounded. On another occasion, a square of French Grenadiers, attacked in open country by British cavalry, succeeded in beating a fighting retreat, despite charges pushed home so fiercely that in the attack by one squadron, ten men fell dead and wounded among the bayonets of the front ranks. When posted in battle array to withstand a series of cavalry assaults, as were those of the Duke's along the ridge at Waterloo, the squares were often arranged in checkerboard fashion, so that fire from the side faces could sweep the ground between. Artillery was normally posted between the squares, the gunners seeking safety in the squares when the attacking waves of horsemen broke over them, while the teams and limbers retired to the rear.

The carrying out of the complicated evolutions necessary for the maneuvering of masses of men called for intensive drill. The performance of such evolutions with parade ground perfection, while under fire and during the noise and confusion of an engagement also called for steady nerves. So did maintaining the formation intact in the face of heavy losses. For if the square was impenetrable to cavalry, it was terribly vulnerable to the gun. One of the uses of cavalry was to force infantry from line formation, where its fire-power was fully developed, into square, where the number of muskets it could bring to bear on any given

target was drastically reduced. And not only did the cavalry force the infantry into square, but by the mere threat of its presence kept them there, while artillery, acting in conjunction with the cavalry, tore their massed formations to shreds.

For, with the arrival of artillery on the scene, the infantrymen, in their turn, were helpless targets. As long as they were menaced by cavalry the infantry did not dare move, either to attack the guns or to retreat. The slightest wavering, the first sign of weakness, and the cavalry were down on them like the wolf on the fold.

"Though we constantly thrashed our steel-clad opponents, we found more troublesome customers in the round shot and grape, which all this time played on us with terrible effect, and fully avenged the cuirassiers. Often as the volleys created openings in our square would the cavalry dash on, but they were uniformly unsuccessful . . .

"On their next advance they brought up some artillerymen, turned the cannon in our front upon us, and fired into us with grapeshot which proved very destructive, making complete lanes through us, and then the horsemen came to dash in at the openings. But before they reached us we had closed our files, throwing the dead outside, and taking the wounded inside the square; and they were forced again to retire. They did not, however, go further than the pieces of cannon—waiting there to try the effect of some more grapeshot."

The courage showed by troops thus exposed for hours to a destructive fire to which they could not reply was of a very high order. Discipline certainly played a great part, but few of the troops so exposed were veterans; most were youngsters, hardly more than raw recruits.

Sir Andrew Barnard who commanded the 1st Battalion of the 95th said: "The best troops we had at Waterloo were almost all second battalions, scarcely out of the goose-step. They stood, and hammered away as well as the oldest, but it would have been very hazardous to have maneouvered with them under fire as with the old Peninsulars."

To stand in ranks through a long afternoon, exposed to a storm of shot and shell, is so foreign to modern practice and training, that one cannot help wondering how present-day troops would behave under such circumstances, and if perhaps our ancestors had some special brand of inner fortitude which we moderns lack.

Writes a sergeant: ". . . Our men were falling by dozens at every fire. About this time, also, a large shell fell just in front of us, and while the fuze was burn-



French Cuirassier

ing out, we were wondering how many of us it would destroy. When it burst, about seventeen men were either killed or wounded by it; the portion which came to my share, was a piece of rough cast-iron, about the size of a horse-bean, which took up its lodging in my left cheek . . ."

An ensign of the 52nd had this to say:

"... I could see that it was pointed at our square, and when it was discharged I caught sight of the ball, which appeared to be in direct line for me. I thought, Shall I move? No! I gathered myself up, and stood firm, with the colour in my right hand. I do not exactly know the rapidity with which cannon balls fly, but I think that two seconds elapsed from the time I saw the shot leave the gun until it struck the front face of the square ..."

After the general advance at the end of the day, the positions which had been occupied by the squares were outlined by the bodies, which lay in ranks as they had fallen.

"Our division," writes Kincaid of the 95th, "which had stood upwards of five thousand men at the commencement of the battle, had gradually dwindled down into a solitary line of skirmishers, the 27th Regiment were lying literally dead, in square, a few yards behind us."

The actual losses of this regiment were 478 out of 698 who marched into the fight.

Waterloo

The final combat between the fighting men of the two nations has been voluminously described. It was a soldier's battle—a bloody hammer-and-tongs affair, which did Napoleon little credit. Students of the great man remark on the strange lassitude which occasionally gripped him in moments of stress, seemingly numbing his otherwise keen strategical sense and his boundless energy. Waterloo was a case in point, and his performance that day was a sorry disappointment to those who remembered his earlier triumphs. Wellington, on the other hand, chose his ground with care (he remarked on its possibilities on a previous occasion) and fought his battle with coolness and skill.

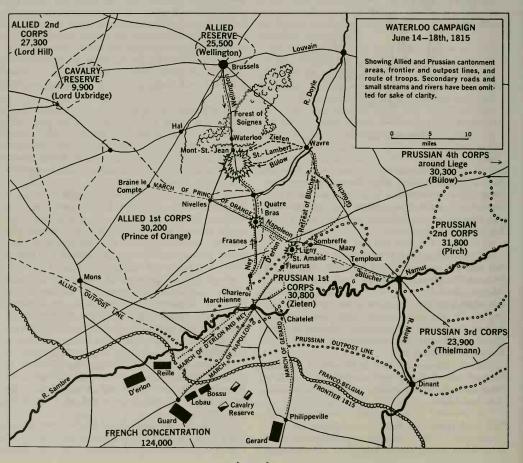
Strategically, the retention of a comparatively large force (18,000 men and 30 guns, of which only 3000 were British) at Hal has been much criticized, but it is easy to be wise after the event and the Duke had some reason to believe that part of the French forces might attempt to make a flanking attack around the rear of his position.

The dispatch by Napoleon of Grouchy with 33,000 men and 110 guns to follow the Prussians after their defeat at Ligny was a more serious fault, especially as the Prussian line of retreat had been insufficiently scouted. The campaign as a whole had been brilliantly planned and the concentration of the French forces had been swift and secret. However, the advantages won by the masterly opening moves were thrown away by Ney at Quatre Bras and Grouchy on the Dyle. Napoleon was ill-served on this occasion, but it was certainly possible for him to have kept a tighter control on his marshals' movements than he did. He was, in fact, reaping the harvest of his own self-sufficiency. He had for so long insisted on attending to even the minutest details, given all orders; in short, deprived his commanders of all initiative, that few-and Ney was certainly not one of them-could be trusted to act with decision and effectiveness on their own.

In brief, the campaign called for concentration of the French forces (which were distributed in the area of Lille, Mctz, and Paris) on Charleroi, where they would drive into Belgium between the scattered Allied forces, whose cantonments were spread over an area ninety miles by thirty. The French Army was to operate in three parts, two wings and a reserve (the Guard). All three would be within easy marching distance of each other. On contacting the enemy, one wing would be joined by the reserve, to furnish power for a knock-out blow, while the other wing interposed between the threatened Allied force and any coming to its rescue.

The Allied forces consisted of the Anglo-Dutch, under Wellington, 93,000 strong, with headquarters at Brussels, and the Prussians, under Field Marshal Gebhard von Blücher, numbering 116,000 with headquarters at Namur. The Prussians were of fairly uni-

form quality, although after Ligny some 8000 deserted, (these had mostly been recruited in territory recently belonging to the Empire) but the Duke's forces were a collection of several nationalities; Nassauers, Dutch, Belgian, Hanoverians, Brunswickers, and British, of whom only 24,000 British and the 5500 veterans of the King's German Legion were thoroughly reliable. Of the British, few were seasoned troops—most of the veteran Peninsular regiments being in America. A majority of the units at Waterloo were second or third battalions, filled with recruits scarcely able to drill. The Duke said afterward that had he had his old army with him at Waterloo, he would have attacked. When asked how long he thought the French would have stood he answered,



"about three minutes," and considering the fight put up by the 21,000 British present at the battle, the Duke's estimate of the effect of 60,000 such men as had fought their way through Spain and across the Pyrenees is probably not exaggerated. As it was, the splendor of the Peninsular Army's achievements, with their six years of almost unbroken triumphs, had given the British Army as a whole such confidence in itself and its leader that the rawest recruit fresh from the plow was imbued with the spirit of victory.

Some of the 41,000-odd continentals who served with Wellington fought like heroes; others ran like rabbits at the first shot. One regiment of Hanoverian hussars fled all the way to Brussels, its colonel at its head. Prussian Field Marshal Baron Karl von Müfling estimated the number of runaways hidden in the Forest of Soignes alone at 10,000. As Kincaid wrote in his Adventures of a Rifleman: "We were, take us all in all, a very bad army." The 74,000 Frenchmen present, on the other hand, were veteran troops devoted to their Emperor — probably one of the finest armies of its size that ever followed the Eagles.

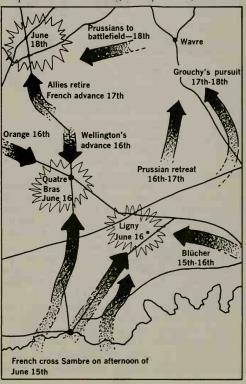
The Emperor completed his concentrations and crossed the Belgian frontier with 124,000 men at dawn of the fifteenth of June. Despite momentary delays the bridge over the Sambre at Charleroi was stormed just after noon and by early evening, Ney with the left wing was in front of the crossroad village of Quatre Bras, Grouchy (right wing) was about to occupy Fleurus, while elements of the center were at Frasnes.

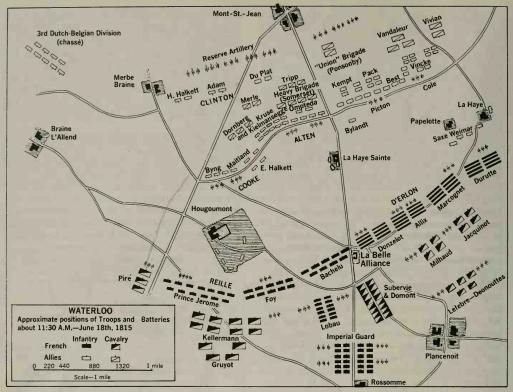
The speed of the French concentration had taken the Allies unawares, but Blücher hastened to bring his troops together around Sombreffe, Mazy, and Namur, while Wellington moved to support the troops holding Quatre Bras.

The morning of the sixteenth saw the Prussians massing at Ligny, at which place Napoleon attacked them. Meanwhile Ney had delayed moving on Quatre Bras, which he could have taken with ease. By the time (2:00 P.M.) that he finally attacked, enough troops had arrived to hold him in check. The ground around Ligny, meanwhile, was the scene of a furious battle between Blücher and the Emperor and Grouchy. This was of far greater importance than the action at Quatre Bras, and Napoleon ordered the I Corps (commanded by the Comte Drouet d'Erlon) to leave Ney's force and march to assist the main effort to Ligny. Ney, however, short of men as increasing numbers of Wellington's troops arrived on the field, and urged on by his Emperor's orders to take Quatre Bras without further delay, sent orders for d'Erlon to return. That general, although his troops had reached the fringes of the battlefield at Ligny (where their appearance caused a momentary panic among some of the French troops, who mistook them for Prussians) obediently turned them around and headed them back to Quatre Bras. They arrived there at 9:00 P.M. after the battle was over and Ney had withdrawn, having wasted the precious hours of the afternoon (and some 20,000 men) marching and countermarching between both battlefields, without firing a shot.

The fighting at and around Ligny, Sombreffe, and St. Amand had been most severe, and it was not until late evening, when the Guard had been committed to a final assault, that the Prussians were finally beaten. They lost 12,000 men and twenty-one guns, but French casualties were also heavy (8500) and, although Napoleon did not know it, the beaten army had retreated, not east, which would have separated them immediately from Wellington, but north, where there was still a possibility of a junction.

Next day, June 17, should, logically, have seen the Emperor hasten from Ligny to join Nev, when the





combined forces should have been sufficient to crush Wellington, who still held the crossroads—unaware (until 7:30 A.M.) that his ally had been defeated. But for reasons unknown, Napoleon did nothing beyond sending Ney a dispatch (remarkable for its obscurity) which left a fresh attack on Wellington to his discretion. Consequently, when Napoleon finally came to his senses (he is said to have been suffering from overstrain and loss of sleep) and ordered an advance, Wellington had begun a leisurely retreat, covering the movement with cavalry and artillery. A downpour of almost tropical intensity impeded the pursuit and the Duke's troops arrived at their position around Mont-St.-Jean almost without incident.

The French moved up during the evening, some not arriving until after midnight, and the two armies spent a miserable night—cold, wet, and hungry.

Sergeant Wheeler of the 51st Light Infantry wrote:
"... the ground was too wet to lie down, we sat on
our knapsacks until daylight without fires, there was

no shelter against the weather; the water ran in streams from the cuffs of our jackets. . . . We had one consolation, we knew the enemy were in the same plight as we were."

A shallow undulating valley, never wider than 1200 yards, separated the two armies. The total length of the battlefield is some four miles, but most of the action took place on a front of less than two miles. In this small area of some two square miles were crowded more than 140,000 men, and some 411 guns. From the French side, the ground slopes gently down from the inn, La Belle Alliance, and rises again to the ridge on, and behind which, Wellington's men were bivouacked. The Charleroi-Brussels road cuts straight across this valley. On it, a little below the crest of the northern, or British, ridge lies a farm, La Have Sainte. Nearly a mile to the left of this, and in the valley, is the château of Hougoumont, whose orchards and walled gardens were to be the scene of a violent conflict. To the right were the farms of Papelotte and La Haye. Along the top of

the northern ridge ran an unpaved road, in places through cuttings five and six feet deep and in part bordered with thick hedges. Behind the northern ridge, on the Brussels road, lay the hamlet of Mont-St.-Jean, and a few hundred yards farther on was the forest of Soignes.

Favorable as the position was, Wellington would not have fought there with the collection of troops under his command had Blücher continued his retreat, but the doughty old marshal, although he had been pinned under his dead charger at Ligny and barely rescued from the French cuirassiers by his aide, sent word at 2:00 A.M. that he would march to Wellington's assistance at daybreak. Thus assured, the Duke distributed his troops (67,650 men, 156 guns) along the ridge, the majority on the reverse slope out of reach of the French cannon. (On the morning of Ligny, Wellington had ridden over to confer with Blücher and had remarked on the way the Prussian masses were drawn up on the forward slopes of the ground, exposed to the full brunt of the French artillery. "If they fight there they will be damnably mauled," he had said.) La Haye Sainte and Hougoumont were strongly garrisoned, as were La Haye and Papelotte.

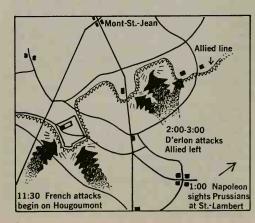
The French had taken up their positions to the music of their regimental bands and amid frantic cheers for the Emperor, but there was a long delay before the action started. Napoleon later gave as the reason a desire to let the wet ground dry enough as to be practicable for artillery. Whatever the cause, it allowed the Prussians further time in which to move their forces to the scene. It was not until 11:30 A.M. that the battle began with an attack by the French left on Hougoumont. This was intended as a feint-to draw Wellington's attention from his center, where the main attack was to fall. However, Jérôme Bonaparte turned the movement into a real attack, with the result that more and more French troops became involved in the struggle for the château. Hougoumont was garrisoned by light companies of the British Guards, who held it throughout the day, despite repeated desperate attacks.

To prepare for the attack on the center, a battery of some eighty guns was massed on a ridge to the right of La Belle Alliance. As Napoleon was about to give the order for the cannonade to commence, and before the waiting guns belched the smoke which was to hang like a pall over the field until the end of the day, his telescope picked out a dark mass to the northeast, like a shadow on the ground, near Chapelle-Saint-Lambert. At first it was believed (wishful thinking, perhaps) that it was Grouchy, but

soon a captured Prussian dispatch rider revealed that it was Bülow's IV Corps, the vanguard of Blücher's main army

For the fact that these troops were Prussian and not French, the blame must lie equally with Napoleon and his marshal. Grouchy had dawdled in his pursuit, been fooled by false and incomplete reports, and had erred in his tactics. Napoleon, on the other hand, certain that the Prussians could not recover sufficiently from their beating of the sixteenth to face action again so soon afterward, refused to take such a threat seriously. Even when in receipt of a dispatch from Grouchy stating that the Prussians were definitely retreating north, he did not order him to rejoin the main army until 1:00 P.M., when he saw the Prussian advance guard himself. By then it was too late. Grouchy was already engaged with the Prussian rear guard (Baron Johann von Thielemann's III Corps) and in any case, could not have reached the battlefield until nightfall.

The appearance of the Prussians, unwelcome as it might be, did little to damp Napoleon's confidence. The odds in his favor, he declared, had been go to 10, now they were still 60 to 40, and after detaching the Comte de Lobau's corps and some cavalry to hold the Prussians in check, he launched his attack on Wellington's line. Comte Drouet d'Erlon's corps, thirty-three battalions, in four massive columns, advanced in echelon from the left. One column, on the left, attacked La Haye Sainte, while another on the right, drove the Nassauers out of Papelotte. These, under Prince Bernhard of Saxe-Weimar, were reinforced and retook the farm, and from then on the contest on the left of the Allied position is of little further interest. Men fought and died all afternoon in



the enclosures, hedgerows, buildings, and hollow ways of that part of the field but no decisive movements were made there, and the action finally developed into an outsize skirmish. The rest tramped over the soggy, slippery ground, through the standing wheat, and up the slope in front of Wellington's left-center. Allied cannon plowed bloody lanes through the dense columns, who closed ranks and came on, with drums rattling and much shouting, while the French guns maintained a furious fire over their neads. Their steady advance, and the wall of glittering bayonets, was too much for a Dutch-Belgian brigade, who bolted as one man. "The movement carried with it the appearance of its having resulted from a word of command."

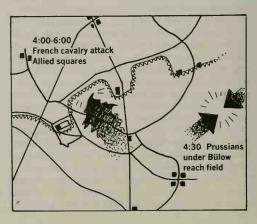
But the British infantry on the ridge were of sterner stuff. As part of the French crested the rise, they were met with a blasting volley and the cold steel and were hurled back down the slope. Others heard the dread thunder of hoofs, and before they could change formation, were charged by the Union Brigade and tumbled in wild disorder into the valley, the riumphant troopers slashing at them as they ran. Simultaneously on the other (west) side of the Brussels-Charleroi road a strong force of French cavalry (mostly cuirassiers, under Kellermann) surged up the slope, rode over a battalion of Hanoverians attempting to reinforce the garrison of La Haye Sainte, and approached the crest of the ridge with a great clattering and jingling. A charge of the Household Brigade met them there: "coming to the shock like two walls, in the most perfect lines," and drove them in great disorder, back to their positions amid a terrific din: "You might have fancied that it was so many tinkers at work." The exultant British troopers, mingling with those of the Union Brigade, swept on into the French positions, and sabred the gun crews of some thirty of the cannon in the Great Battery. In disorder, their horses blown, they were attacked by fresh bodies of euirassiers and lancers and suffered severely. The losses incurred in their rash pursuit were so heavy that Wellington, short of cavalry to begin with, was badly handicapped for the remainder of the battle.

But the first great attack had failed, and Ney was ordered to assault La Haye Sainte again. This effort, a feeble affair, was beaten off, but Ney, thinking he saw signs of withdrawal behind the British center, ordered the attack renewed by three divisions of eutrassiers and dragoons. To attack unbroken infantry under such circumstances, without proper infantry or artillery support, was folly, but Ney persisted, and forty squadrons, almost filling the area between La

Haye Sainte and Hougoumont, trotted up the slope. The allied infantry were in a checkerboard of squares, the batteries between. The battery commanders were ordered not to withdraw their pieces: the gunners were to run for shelter in the nearest square when the cavalry were almost upon them. Their fire worked terrible havoe in the crowded ranks of horsemen. One battery in particular, Mercer's, did such execution that its position was marked next day by the heaps of dead horses and riders in front of it. The fire from the squares added to the carnage, but the uselessness of the slaughter did not deter Ney. When the first assault broke and streamed back down the slope, they were rallied and lead once again into the furnace.

Mercer's account gives an accurate picture of the scene, so alien to modern ideas of war-making that it is almost unbelievable.

"On they came in compact squadrons, one behind the other, so numerous that those of the rear were still below the brow when the head of the column was but at some 60 to 70 yards from our guns. Their pace was a slow but steady trot . . . On our part was equal deliberation. Every man stood steadily at his post, the guns ready, loaded with a round shot first and a case over it: the tubes were in the vents; the port fires glared and sputtered behind the wheels. . . . The column was led on this time by an officer in a rich uniform, his breast covered with decorations, whose earnest gesticulations were strangely contrasted with the solemn demeanor of those to whom they were addressed. I thus allowed them to advance unmolested until the head of the columns might have been about 50 or 60 yards from us, and then gave the word, 'Fire!' The effect was terrible. Nearly the



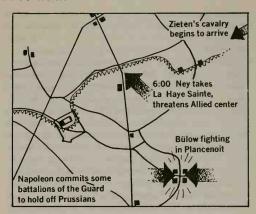
whole leading rank fell at once; and the round shot, penetrating the column, carried confusion throughout its extent. The ground, already encumbered with victims of the first struggle, became almost impassable. Still, however, these devoted warriors struggled on, intent only on reaching us. The thing was impossible. Our guns were served with astonishing activity, whilst the running fire of the two squares was maintained with spirit. Those who pushed forward over the heaps of carcasses of men and horses gained but a few paces in advance, there to fall in their turn and add to the difficulties of those succeeding them. The discharge of every gun was followed by a fall of men and horses like that of grass before a mower's scythe..."

Napoleon was by now well aware of Ney's folly in committing the cavalry to such assaults on so vast a scale. But once committed there seemed no alternative but to continue and the attacks were repeated, more and more squadrons being thrown in, until 9000 cavalry were massed in an area so small that, in places, the pressure forced horses and men off the ground. The slopes and the ground around the squares was carpeted with the dead and dying but still the indomitable horsemen pressed onward. Seldom has cavalry made such devoted efforts, yet each assault only added to the slaughter. Had the attacks been coordinated with the advance of artillery and infantry, their sacrifice would have given those arms time and opportunity to advance unmolested to within striking distance of the squares. As it was, a few guns were moved up in support of the horsemen and did terrible damage to the Allied infantry, who, because of the cavalry, could not change formation but had to stand in squares and "take it."

"About six o'clock I perceived some artillery trotting up our hill, which I knew by their caps to belong to the Imperial Guard. I had hardly mentioned this to a brother-officer when two guns unlimbered within seventy paces of us, and by their first discharge of grape, blew seven men into the center of the square. They immediately reloaded, and kept up a constant and destructive fire. It was noble to see our fellows fill up the gaps after every discharge. . . . We would willingly have charged these guns, but, had we deployed, the cavalry that flanked them would have made an example of us."

Strangely enough, no attempt was made to carry away or disable the temporarily abandoned guns. In consequence, as the attacks ebbed away down the slopes, the British gunners plied their recaptured pieces with renewed vigor.

The ground was very soft (in places hoof tracks,



measured next day, showed a depth of eighteen inches!) and artillery could only have maneuvered with difficulty; still, a greater effort should have been made, and with a master gunner such as Napoleon in command it is difficult to understand why it was not. As it was, the magnificent French cavalry was shattered in one senseless charge after another.

The Prussian advance was slow; roads were bad, and a fire in the town of Wavre held up the ammunition wagons until it could be got under control. Instead of one o'clock, it was 4:30 when Bülow's advance guard struggled through the narrow defile of Saint-Lambert and attacked the French right. Though late, their arrival made it all the more imperative for Napoleon to defeat Wellington before the deployment of Blücher's main body made such a move impossible.

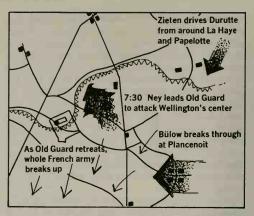
A fresh effort against La Haye Sainte was ordered, and this time it was successful. The gallant defenders had expended all their ammunition. No more was to be had, and in a furious assault the place was overrun. Major Baring and forty-two men, out of nine companies, managed to break through to the Duke's lines. The importance of the position immediately became apparent. A battery of French horse artillery was rushed into position close to the farm buildings and only 300 yards from the Allied line. Under cover of its fire and that of swarms of skirmishers, the survivors of Drouet d'Erlon's columns again attacked the weakened Allied center. The pressure on this part of the Duke's line was so severe that for a time the issue hung in the balance. Had Napoleon been willing to commit the fourteen battalions of the Old and Middle Guard the battle might have been decided in his favor. Only the impact of a few fresh troops seemed to be needed to smash through the Allied formations, weakened as they were by attrition and desertion. If ever an elite corps, such as the Imperial Guard, had an opportunity to justify its existence it was now. But this was a move Napoleon was not prepared to make. When Ney, who had squandered men with a lavish hand all afternoon, begged for a few more troops to achieve a breakthrough, the Emperor petulantly demanded "Voulez-vous que fen fasse?" The Napoleon of Austerlitz could not have made men but he would have thrown in all his last reserves at this decisive moment, and probably won. The Napoleon of 1815 hesitated—and was lost.

The moment was a critical one for both commanders. The increasing pressure of the advancing Prussians had forced Lobau's corps back; the village of Plancenoit, to the right and rear of the French positions, was captured, and only retaken by Duhesme's division of the Young Guard. These in turn were driven out, and only a magnificent attack by two battalions of the Old Guard recovered the village and stabilized the line.

Shot from the Prussian cannon were falling around La Belle Alliance and if the battle were to be won, Wellington's battered ranks must be broken before Blücher could bring his whole force against the French flank. But the delay had given Wellington time to reorganize his center, and Prussian Field Marshal Count Hans von Zieten's corps was already making its appearance on the Duke's left when Napoleon belatedly ordered the Guard to the attack. Ney at their head, the veterans, in review order, their arms at the present, passed their Emperor for the last time.

As the dark blue ranks made their way up the blood-washed slopes, they were met by a hail of case shot from the remains of the Allied batteries. Grape tore through their lines sweeping away whole files; but, closing their ranks, they steadily advanced in two columns, the drums beating the pas de charge, interspersed with shouts of "Vive l'Empereur."

Separated in the smoke and confusion, the battalions of one column struck the line first. After a brief struggle, they were driven back by the British Foot Guards. As they rallied, the other column moved up to the attack. But the 52nd, of Peninsular fame, almost up to full strength, was stationed on the right of the British Guards. Seizing the initiative (like a good Light Division man and an apt pupil of Sir John Moore) their colonel, Sir John Colborne, led his men out from the Duke's line and deployed it along the flank of the French column. The massed fire of the battalion staggered the Imperial Guardsmen. Drop-



ping in heaps, they tried to rally, then broke and fled. Reinforced by the 95th and the 71st, the 52nd swept across the field at right angles to the Allied line, smashing and routing the first columns, which were once more advancing. The defeat of the Guard (about 8:00 P.M.) was a signal for a general retirement all along the line, a retreat which speedily became a rout as the Duke ordered an advance by the whole Allied army. Spearheaded by Vivian and Vandaleur's light cavalry brigades the Allied battalions poured down from their slope, sweeping the disorganized French before them.

Simultaneously, Bülow's corps had finally smashed Lobau's attempts to hold Plancenoit and the French right rear, while the Prussians on the Duke's left, had forced the French from Papelotte.

Earlier in the day, Napoleon had ordered the news spread that Grouchy was approaching in support. It was here, on the French right, that the falsity of the report, which had had the temporary effect of lifting the French morale, became brutally apparent. In all such cases, the impact of the truth, when it becomes known, is devastating. Napoleon's psychological weapon rebounded—and the men at Papelotte and La Haye were the first to raise the cry of "betrayal," followed inevitably by the fatal "Sauve qui peut."

Soon the reserve battalions of the Guard were the only French troops retaining their formation and the whole field was filled with masses of fugitives, into which the English and Prussian cavalry charged repeatedly, while the Allied infantry and artillery poured a deadly fire into the stricken crowds.

Napoleon himself rode off at the head of the two battalions of the 1st Regiment of Grenadicrs of the Old Guard. These were the cream of the veterans of the whole army, and they forged at a slow march through the wreck of fugitives and pursuing horsemen, halting every so often to deliver a crashing volley and then resuming their stately progress, to the dull roll of the Grenadier's March.

Erckmann-Chatrian, in their Waterloo wrote: "In the distance the Grenadiers call was being beaten, like the tocsin sounding in the midst of a conflagration; but it was even more terrible than that; it was the last appeal of France . . . that rolling of the drums of the Old Guard in the midst of our disaster was at once moving and terrible."

And so the Old Guard passed into history. Few corps have been accorded the honors and fame won by these mustachioed warriors. Their memory lives on, and the title "Old Guard" still stands for all that is stalwart, stubborn, uncompromising, and unshakable. And so, too, Waterloo became history—to stand, in its turn, for any final and crushing defeat. Even by the standards of a couple of years before the numbers engaged were insignificant, and the area over which the battle was fought a mere pocket handkerchief. Yet over 40,000 men fell that day and the victory changed history, or prevented it from changing, as few battles have.

To the student of history, there must come at times a feeling that the overthrow of Napoleon was a mixed blessing, and that the victory of the Duke and Blücher, representing the crowned heads of Europe, was a turning back of the clock—a triumph for the status quo. Certainly the bright promise of the early days offered a gleam of hope to those few intelligent enough to see that the permanent division of Europe into a host of sovereign states could lead only to ultimate disaster. But to few men is given the ability to wield vast power and still retain the humility, humanity, and understanding which should accompany it. Napoleon was not one of them.

To us he is just a name—to many perhaps almost a figure of fun—something from a political cartoon; a short, stout man in a strange hat, one hand always inside his tunic clutching his left breast, while he gazes intently across a battlefield, or an ocean. To his generation he was either a demon or a demi-god. He so completely dominated his age, his influence was so strong, and the upheavals he set in motion so devastating that no one could remain neutral in their feelings toward him. To some he was the fount of all wisdom and glory, and to die for him was an honor. To others he was Anti-Christ, and they ardently desired to fling him into the Pit. His victories were legendary; his campaigns spread death and destruction throughout an entire continent; and the depreda-

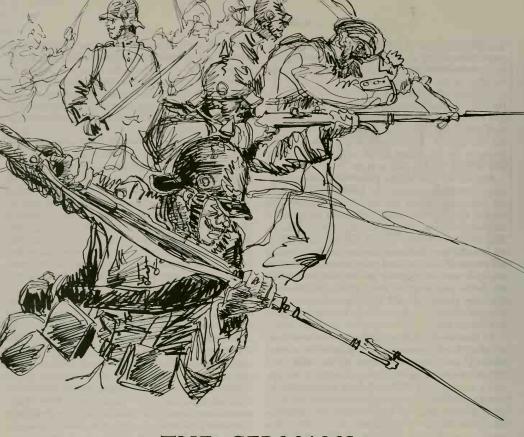
tions of his armies made the name of Frenchmen hated and feared from one end of Europe to the other.

Yet such is human nature that before many years had passed, the horrors had been forgotten, and only the glory; the gleaming eagles, the charging cuirassiers, the steady ranks of the Guard were remembered.

Of the one hundred and fifty years since Waterloo, scarcely one has gone by without its quota of wars and rebellions. Some of these were only brush-fire operations, to be expected in an age where colonialism, in one form or another, claimed all but a fraction of the less civilized regions of the earth. Others were major conflicts between civilized nations, growing in scope and intensity as science and technology progressed, and culminating in the two World Wars and the ever-present threat of an even more devastating conflict to come. During that time empires have come and gone and new nations have risen, bringing with them new loyalties and new hatreds.

The story of the nineteenth century is that of the gradual disappearance of the small army of full-time soldiers, with its impersonal professionalism, and the substitution of conscription and the mass levy. The citizen-in-arms, whipped, at the appropriate time, from his customary apathy into a semi-hysterical frenzy by diverse methods of propaganda (from which exalted state he is easily dashed by the first taste of defeat) - and in most cases, by force of circumstances, thrown into combat before he is properly trained - does not make the best soldier. However, given proper leadership, time to absorb a little esprit de corps, and some practical experience (providing the experience does not consist of one defeat after another) and he will make a passable fighting man. It was with such material as this that the great wars of the first half of the twentieth century were fought.

Naturally, with the nations on the march with their millions, and war following war in rapid succession, it is impossible to choose the men of one or two countries as the ideal warriors of the last century and a half. I have therefore thought it wise to discuss the respective merits of the fighting men of each of the major powers. With lamentably few exceptions, the countries of the world have nearly all been at war at least once during the last 150 years (even the usually peaceable Swiss fought each other in a pitched battle in 1847). It is therefore with the knowledge that many fine soldiers and many warlike feats are being overlooked entirely that the following chapters are written.



THE GERMANS

Since the turn of this century Germany has been defeated in two great wars, and in each her soldiers have earned themselves an unenviable reputation for "frightfulness." They have also won a reputation as splendid soldiers; disciplined, courageous, steady, efficient, with an aptitude for the mechanics of scientific warfare, and a ruthlessness in carrying out orders lacking in most of their adversaries. Any commentator on military affairs must, of necessity, remain impartial; and regardless of the characteristics and aspirations of the German people as a whole, there is no doubt that the German soldier is one of the finest in the world. Twice within the last half century they have come close to bringing Europe under German domination and have been ultimately

defeated only by an overwhelming display of men and equipment.

The old, brittle military machine of Frederick's II's Prussia was smashed utterly at Jena and Auerstadt (1806). It had been divorced completely from any ties with the civil government or the people, and therefore, when it went down in ruin, there was no organized resistance, no "cushion" of reserves, to deaden the shock to the Prussian state. But the bitter resentment of the people to French oppression developed into a widespread patriotic movement, fostered by a small number of army officers, and organizations, such as the famed "Tungenbund," which ultimately led to a national uprising.

The treaty of peace allowed Prussia only a small

force under arms (42,000). To evade this (much the same system was used to circumvent the military restrictions imposed by the Treaty of Versailles after World War I), the so-called Krumper system was brought into use whereby recruits were trained as thoroughly and as swiftly as possible and then passed into the reserve. The standing army in that event became little more than a training cadre, expanded in time of war by a large number of reservists. This system of compulsory short service with a reserve is the basis for the military organizations of most of the great powers today.

Events moved too fast for the full development of this system to be of effectiveness in the general rush to arms following the declaration of war in 1813. The troops who fought in the Wars of Liberation were volunteers, or members of the new Landwehr, or enrolled militia, called into being by the law instituting

compulsory military service (1814).

Unfortunately the liberal reforms promulgated by men like Baron Heinrich Stein, which were to accompany this patriotic rising of the people, were not confirmed by the King. There was too much opposition, especially by the feudal landowners—the Junkers of Old Prussia—serfdom was not abolished until 1807—and the pattern of autocracy which was to characterize Prussia, and, in turn, Prussian-dominated Germany, was set.

Demagogenhetzerei (demagogue hunting) became a popular pastime for the Prussian police and any tendency toward liberalism was ruthlessly stamped out. The Junker class all but monopolized the army ("heartless, wooden, half-educated people, fit only to be turned into corporals or calculating machines," Stein called them) with the exception of the more mechanical branches such as artillery, engineers, etc. This domination of the military by the aristocracy (and a most reactionary aristocracy, at that), was to have a profound effect on the German nation, and upon world history.

The historic role of Prussia, originally so insignificant a part of Germany, is, in effect, that of a small snake which ultimately succeeds in swallowing a victim much larger than itself. This policy of absorption, carried out over the years, inexorably, but with many fluctuations of fortune, was finally brought to a triumphant conclusion when, in 1871, the unification of Germany was completed and William I of Prussia became Emperor of Germany.

The war machine with which Prussia accomplished this was based on the now familiar compulsory service system, with the released soldiery passing into a reserve which could be mobilized in time of emer-



Wurtemberg infantryman at time of Napoleonic Wars

gency. While such an army might not be equal in efficiency to a standing army of long-service men it was cheaper to maintain (the soldiers were paid only a small amount, not enough to induce them to enlist as a long-service force of professionals) and provided a large reserve of men who had received two or three years concentrated military training.

The original "national army" of 1814 called for three years in the standing army, two in the reserve, and fourteen in the Landwehr. Preparations for war with Austria in 1850 (the sole casualty of this inglorious affair, which resulted in much loss of face for Prussia, was a bugler's horse) and with France in 1859, showed up defects in the system. Too much strength lay in the Landwehr, many members of which had not seen service for ten years. Reforms carried out in 1860 raised the annual contingent from 40,000 to 63,000. The time in the reserve was doubled, and the length of service in the Landwehr was lowered from fourteen to five. The total force was slightly less, but the standing army, plus reserves was more than double (441,000 to 100,000) while the less efficient Landwehr was reduced.



Prussian Cuirassier, 1819

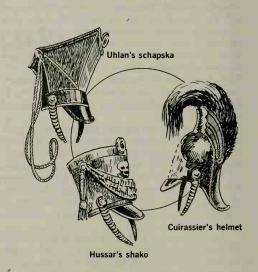
The tactics of the mid-nineteenth century called for a modified form of the mass assaults of the French armies of the Revolution, with a reinforced firing line advancing under cover of its own fire, supported by small company (240-250 men) or half-battalion columns. This method of attack was greatly facilitated by the adoption into the Prussian service, beginning in 1841, of the famous needle gun. This weapon, a bolt-action rifle, was the first efficient breechloader, and, while it had many grave defects - comparatively short range, escape of gas at the breech and excessive fouling, to name a few-it was a great advance over the muzzle-loaders of the day. Among other things, it enabled its user to load while advancing, and also to load in the prone position-a difficult feat with a muzzle-loader.

With the exception of two short wars with the Danes over Schleswig-Holstein (1848 and 1864) the Prussian army had enjoyed (or rather, suffered from) a half century of peace. In 1866, it was pitted in war with Austria, which was aided by Saxony, Bavaria, Hanover, and some other small German states. Italy sided with Prussia, and an Austrian force was engaged in Venetia.

The long service (seven year) Austrian Army, which had seen recent fighting in Italy (1848–49) and again against French and Sardinian forces in 1859

was deemed by most foreign experts as superior to the Prussians. On the other hand little was expected of the Italian diversion. However, the Prussian Army had one great advantage, one which was to make itself felt decisively not only in the war with Austria, but in the coming struggle with France. This was the Prussian staff system, and, as this system had such an effect on the fortunes of the army, and in future years on the whole German nation (as well as becoming a model for many other armies) it may be well at this point to devote a few paragraphs to this unique institution.

Almost every chief executive, whether in the armed services, in government, or in any form of endeavor, finds it necessary to delegate authority, and to rely upon heads of departments for the expert advice and guidance necessary to adequately cover a wide field. This has been true in the military services of civilized nations from historic times - possibly the first such staff officer being the man responsible for supply and transport. As war became more complicated, so the need for experts grew, and so too, it became necessary for one person to head this body of experts, to correlate their information, and to present it in comprehensive form to his general. In many cases, this chief of staff had, in his advisory capacity, considerable influence on his leader. On the other hand, Napoleon used his chief of staff, Louis Berthier, mainly to issue and transmit his orders.



Officer's headgear of 1831

The Prussians, being methodical people, used the staff system and it was a member of the Prussian Quartermaster General's staff, Baron Christian von Massenbach, who as early as 1802 advocated the creation of a permanent unit, to function in peacetime as an operational planning body, preparing in advance plans for every eventuality. Among other things, staff journeys were to be undertaken, to familiarize staff officers with terrain and conditions in certain theaters of war.

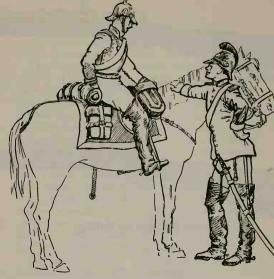
This system, then in its infancy, had no chance of influencing the brief and disastrous struggle of 1806—but showed its worth in 1813, when General Gerhard Scharnhorst was Chief of Staff to Blücher, to whom Gneisenau was attached as General Staff Officer.

The Prussian General Staff grew in size and influence over the years. At the same time, the unique position of the military in the Prussian state forced it out of touch with all political and civilian developments—in a sense out of touch with reality—a circumstance which was to have dire results in later years.

In 1857, the appointment of the Chief of the General Staff was given to a man who was to bring that body its most publicized triumphs and win it lasting renown. That man was Count Helmuth von Moltke, whose careful planning and genius for organization was to encompass the defeat of Austria and the downfall of Napoleon III.

Among Moltke's other claims to fame was his early realization of the importance of the railroads, both in mobilization and in the transportation of troops and supplies to the front. They were more important to the defense of the country, he once said, than fortifications. A railroad department of the General Staff was formed, and, in 1862, the first transportation exercise was held. Prussia was considerably better off in respect to rail transportation than Austria, a fact which loomed large in Moltke's calculations.

Despite the blunders of some of the Prussian generals and a striking lack of reconnaissance by the cavalry of both sides, the Austrian campaign proceeded smoothly "according to plan." The needle gun proved more than a match for the Austrian muzzle-loader, and the Prussians were superior in training, organization, and leadership. The final encounter at Sadowa, (or Königgrätz) came just eight days after the opening shots on the frontier. Almost half a million men were engaged or on the field—the most of any single battlefield up to that time—but by afternoon all was over and the Austrians were in full retreat. The needle gun, the General Staff, the miser-



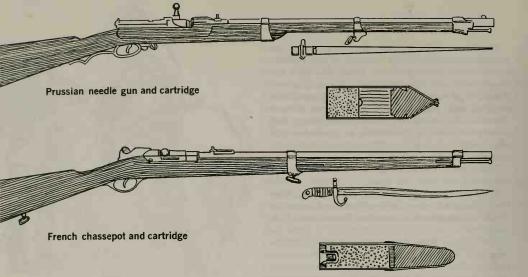
1870-Cuirassier and Bavarian Light Horse

able Austrian generalship, and last, but not least, the Prussian infantryman had won a handsome victory.

Prince Otto von Bismarck, that man of "blood and iron," had no intention of letting the Prussian army rest on its laurels. The long struggle for the hegemony of all Germany had ended in a Prussian victory. To weld the numerous sovereign states and principalities into a united Germany was the next task, and for that there was nothing to equal a smashing German victory over an old and hated foe. So preparations began for a war with France.

The lessons learned in Austria were taken to heart. The cavalry was increased; more attention paid to scouting; and the muzzle-loading pieces of the artillery, which had proved somewhat inferior to those of the Austrians, were replaced with steel breechloaders—products of the industrious Herr Alfred Krupp.

The French, meanwhile, were still using the rifled muzzle-loading cannon. They did, however, possess two weapons which might, in other circumstances, have had a decisive effect on the outcome of the war. One was the infantry arm, the celebrated Chassepot rifle, adopted in 1866. It was, like the needle gun, a single-shot breechloader, using a paper cartridge and closed at the breech with a bolt. It had slightly better gas-sealing properties (by the use of a rubber obturator on the end of the bolt) but, like the Prussian weapon, it fouled badly, and was difficult to load after a few rounds.

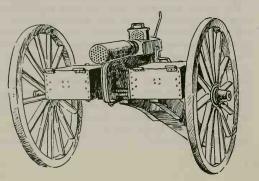


Its superiority over the needle gun lay in its smaller bullet and larger charge - .433 cal, 386 grains, 85 grain charge, as opposed to a .607 calibre, 478 grain projectile with a 74 grain charge. The Prussian bullet was slightly smaller than the rifling, while the French one was larger (thus allowing no windage, with consequent loss of power). The French weapon, therefore, greatly outranged the Prussian - a great advantage in the days of mass formations and volley firing. It must be remembered in this respect that, before the universal use of automatic weapons, platoon firing at long range, the creation of a "beaten zone" through which troops must advance, or the concentration of long-range fire upon a given target, took the place of much of the work done by heavy machine guns today. In the early days it was also used to supple-

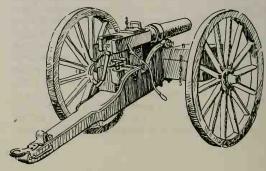
ment the short-ranged (and, due to the imperfect time fuses, inefficient) shrapnel fire of the artillery.

The second weapon, the *mitrailleuse*, the forerunner of the machine gun, was designed to deliver just such a long-range pattern of fire, and had it been used as its inventor, a Major Reffye, intended, it might have proved a very effective weapon. It was definitely to be used as artillery, against troops in the open, and to cover an advance, and not as an infantry weapon (for which, among other things, its great bulk made it unsuitable). However, so great was the secrecy which shrouded the development of this weapon (developed at Napoleon III's personal orders and expense) that only a few officers were familiar with it, and the NCOs who were to handle it in action were only assigned for practice a few days

Mitrailleuse-front view



Mitrailleuse-back view



before war was declared. Under such circumstances, no arm could be very effective. Unsuccessful attempts were made to use it in the infantry firing line, while, when used at long range, in small numbers, it was concentrated on and knocked out by the efficient German artillery.

If the Franco-Prussian War proved anything, as far as the inilitary were concerned, it was that in modern war individual bravery could not overcome poor leadership and organization. The Germans won, not because as individuals they were superior, or even better armed, but because they were better trained, and better led. On a higher level, French staff work was miserable—almost non-existent—and the army, resplendent in uniforms reminiscent of the First Empire, and which the Emperor had been assured was "ready to the last button on the last gaiter," was actually ill-equipped, ill-supplied and even, on occasion, ill-fed.

Not that German staff work and tactics were perfect, but the German system, under Moltke, allowed a certain latitude to the commander on the spot. And while there were many blunders and chance encounters, German leaders almost invariably came to each other's aid, marching to the sound of the guns with

promptness and dispatch.

Another fact which soon became apparent was that the attack could seldom make headway against the massed fire of the breechloader. Even though the French, with typical lack of organization, were frequently without entrenching tools, they often succeeded in beating off German attacks with heavy loss. The battle of Gravelotte (or St. Privat) is a good example. In this case—and this action was only one of several along a front of some six miles—the French were in possession of the village of St. Privat, situated just below the crest of a long slope which afforded an excellent field of fire over open fields for some 2000 yards.

Despite the lack of entrenching tools, a furious bombardment by more than 211 guns for over an hour, although it all but silenced the French artillery, failed to shake the infantry. The famous Prussian Guard, some 15,000 strong, moved up the slope to the attack, but were met with such a storm of rifle fire that they were halted about 600 yards below the crest. Here, unable to advance, and too proud to go back, they lay down and attempted to return the fire from above—but of the 15,000, some 4500 were casualties.

At the other end of the line, a rash attempt to push through the French lines with cavalry and artillery ended in disaster, and a brisk French counterattack created a panic, large numbers of men, without their weapons, streaming back to Gravelotte, where every effort was made to rally them.

A typical German characteristic was manifest in the reaction of the military to the operations of the "pcople's army" which sprang to arms under Léon Gambetta's inspiration after the Napoleon III's surrender at Sedan in 1870. The civilian in arms has been a serious problem since the days of the first standing armies, and nothing is more calculated to infuriate regular troops than to be sniped at from the rear, by people ostensibly civilians, and with civilian immunity. However, German reprisals seem to have been unnecessarily harsh - franc-tireurs who picked off stray Germans were shot in batches - hostages were executed, and towns burned. The thoroughness with which such orders were carried out reveals a streak of cruelty in the dark Germanic soul, one which was to become even more apparent in the wars to come.

The unstable William II, in one of his more unfortunate utterances, adjured his troops, about to embark for China and the Boxer Rebellion, to: "Give no quarter! Take no prisoners! Kill him, when he falls into your hands! Even as, a thousand years ago, the Huns under their King Attila made such a name for themselves as still resounds in terror through legend and fable, so may the name of Germany resound

through Chinese history. . . ."





Uhlan, 1890

No quarter was given and no prisoners were taken, as, fortunately, the war was over before the German contingent landed, but the speech was significant as betraying an attitude, even if a somewhat hysterical one. (The speech was to be remembered fourteen years later when the bodies were still warm in the square at Dinant, and the smoke still rose from the ruins of Louvain.)

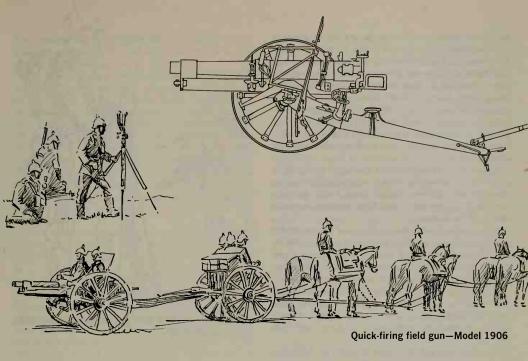
The tendency on the part of the German military to harsh repressive measures has on all occasions proved a grave mistake, not because of the humanitarian reasons involved—war being by nature inhuman—but because of the inevitable repercussions. A woman and child slain in a mass bombing attack or starved by a far-distant naval blockade are just as dead as if killed by the bullets of an invader—yet there is something so repugnant to all civilized people about the deliberate slaughter of civilians of all ages and both sexes, that the feeling of horror rapidly changes to hate against the perpetrators. It is a peculiarity of the Teutonic mind that the obvious reaction to their crimes comes as a complete shock to them. Goethe once said that the German, if forced to choose

between injustice and disorder, prefers injustice. To the tidy German mind, civil disobedience was disorderly. What they failed to understand was that order brought by the firing squad not only strengthens the will to resist of the conquered, but ultimately engenders a force which recoils on the head of the conquerors. Reprisals only serve to beget reprisals. Fortunately for her enemies, the mailed fist of Prussia has seldom been covered with a velvet glove.

To return briefly to the Franco-Prussian War, there were acts of heroism to offset the momentary checks and disasters, among the most famous in German Army lore being General Adalbert von Bredow's famous Death Ride at Vionville-Mars-la-Tour. The historic charge was made by three squadrons of the 7th Cuirassiers and three of the 16th Uhlans (Lancers) and was ordered as a last resort to check a threatened French advance. To reach the enemy infantry, the six squadrons had first to charge a line of guns. This they did, sabring or spearing the gunners, and then with undiminished speed they struck the infantry. Their losses by this time had been heavy, but despite close-range volleys, they cut their way through. Carried away by their success, they could not be rallied and were in turn (shades of Waterloo) set upon by French cavalry and suffered severely before reaching their own lines. Of 310 cuirassiers only 104 came back, and of the Uhlans only 90. Unlike that of the Light Brigade at Balaklava, the charge served a useful purpose, and the advance of the French corps was checked.

Undoubtedly many such attacks, whether by sword and lance, or by automatic weapon and grenade, are ordered in error and the lives of brave men squandered in vain. On the other hand, the decision rarely lies with the unit commander, whose view of the field is always limited. What often looks like a suicidal waste to the men on the spot may appear a logical and supremely necessary move on the part of those in charge of the operation as a whole. Citizen-soldiers, and even veterans, may sometimes balk at orders which send them against seemingly impossible odds. It is in situations like this that discipline and regimental pride must provide the driving force.

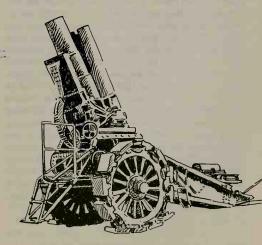
There were other cavalry actions that day, including a cavalry versus cavalry affair—six regiments of German cavalry defeating ten French regiments. But on this and on other occasions during the war, it became apparent that the day of the cavalry charge on the battlefield was over. Against the breechloader, crude as it was, the horseman had no chance. Charge after charge, at Wörth, Vionville, Sedan—all ended with the cavalry suffering frightful losses and seldom



with any result. On the other hand, the German cavalry performed an important service in screening the advancing armies, and in reconnaissance work.

After the war, the German Army, now the instrument of a great and united nation, grew in size, and adapted to the new conditions of warfare brought on by advent of the new developments in weaponry, engineering, and science. The new infantry training regulations of 1906 incorporated the lessons of the Anglo-Boer War and the Russo-Japanese conflict; and in 1910 the colorful old uniforms gave way to practical field-gray. As a great industrial power and one of the world's leading arms producers, it was natural that the armed services should have the most up-todate equipment. Yet, with all the aura of prescience that surrounded the German Staff and War Ministry, there was actually no more anticipation by the German High Command of the new warfare and the weapons that it would bring forth, than there was in any other army.

It is true that in anticipation of the swing through neutral Belgium, which was called for by the famous Schlieffen Plan, the High Command had ordered Krupp to design huge siege guns, monsters of 16.5 inches (420 cm) in calibre, weighing 98 tons and capable of firing an 1800 pound shell nine miles. They



28-centimeter siege gun World War I

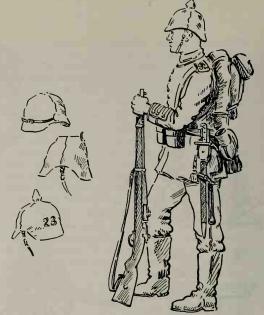
had to be transported in pieces, set up in concrete emplacements and required crews of two hundred. They were to batter down the modern concrete and steel forts of Liège and Namur, which, when once in place, they did in short order. However, these, and the 12-inch Austrian Skoda howitzers, were only a technical advance in siege weapons. A complete revolution in warfare, which was to be brought about by the use of the machine gun (with which all armies were equipped, though on a modest scale), was not anticipated.

In fact, in 1911 a plan for a prototype of the tank, complete to caterpiller tracks, was submitted to the War Ministry, but was turned down. Light, portable machine guns, grenades, and light mortars were also things of the future.

Among other faults, the machinery of control by the General Staff was weak, and HQ was to prove too remote from the scenes of action. Army Group Commands, somewhere between Army and the Supreme Command, would have been more flexible.

However, to do it justice, the German armies which flooded across the frontiers of France and Belgium that hot August of 1914 were well equipped, well armed, particularly with heavy artillery, and well led.

The plan devised by Count Alfred von Schlieffen in 1905 was an answer to the threat of war on two fronts, so dreaded by Bismarck, but which, even as early as 1890, was believed by the Staff to be inevitable. It involved a strong sweep through the Dutch province of Limburg, Belgium, and northern France, with a much lighter holding action on the left. The right – seven-eighths of the total strength, was to smash through the rear of the French armies - so close to the coast "that the man on the extreme right wing must brush the Channel coast with his right sleeve" - and force the surrender of the French forces by pinning them against the Swiss frontier. Meanwhile local forces must hold as best they could in East Prussia (the Germans counted on a slow Russian mobilization) until, France defeated by a lightning blow, Russia could receive all Germany's attention. Even watered down as it was, by Schlieffen's successor, Helmuth von Moltke (nephew of the famous victor of 1870 but by no means his equal) it was a formidable plan, and the imbecility of the French leaders almost ensured its success. When it failed, the Battle of the Marne gave way to that of the Aisne, and so in turn to four years of trench warfare.



Infantryman, 1914, in field gray uniform, pickelhaube with cloth covering

World War I

The fighting of the first weeks of the autumn of 1914 was like nothing seen before or since. As if completely unaware of the deadliness of modern weapons, the high commands of all belligerents sent men to the slaughter in droves. In this holocaust the trained soldiers of both sides vanished.

The German soldier, true to his traditions, played his part manfully in this mass murder. In assault after assault—at Liège (before the big guns arrived), at Mons, where was met the deadly English musketry, in the great frontier battles, at the Marne and at Ypres, the spike-helmeted hordes surged forward in close formation, to fall by the thousands. A Belgian officer wrote of the attack on the outlying field fortifications of Liège: "They made no attempt at deploying but came on line after line, almost shoulder to shoulder, until as we shot them down, the fallen were heaped on top of each other in an awful barricade of dead and wounded that threatened to mask our guns . . ."

Hard hit by the devastating casualties of the first

few weeks were the irreplaceable regimental officers and long-service NCOs, and their loss was to be felt throughout the remainder of the war.

The trench warfare, which followed the failure of the great offensive of 1914, imposed a stalemate on all combatants on the Western Front. The ingenuity of German scientists and engineers produced startling new weapons; poison gas and the flammenwerfer—the modern adaptation of Greek fire, while bomb throwers and grenades were added to the weapons considered indispensable in the new warfare. With characteristic thoroughness, the Germans developed their defensive systems into models of their kind—miracles of interlocking trenches, barbed-wire entanglements, strong points, machine gun posts, and bombproofs.

After the opening weeks, almost always on the defensive, the German soldier, secure behind his sandbagged walls, was able to inflict more casualties than he received. Total German losses on the Western front, from August 1914 to November 1918, have been estimated at 5,383,000 while the Allies lost some 8,175,000. As for the German soldier's efficiency as a fighting machine, Churchill wrote in his World Crisis, 1911–1918: "During the whole war the Germans never lost in any phase of the fighting more than the French whom they fought, and frequently inflicted double casualties on them."

The advent of trench warfare brought a new element into the German army-the "shock troops" (Stosstruppen). The principle, developed by front line officers, was the use in attack of small groups of picked men heavily armed and well-trained in their role, instead of great masses operating along a broad front. These units had a high percentage of officers and NCOs - one such group listing nine officers, twenty NCOs and one hundred men. Individual units were usually small - one officer or NCO and four or eight men. This was not merely an extension of the patrol system common to all armies, but a radically new concept, putting great reliance on the individual fighting man. Emphasis was placed on youth, initiative, and physical fitness. These shock troops received preferential treatment, and were stationed behind the trenches, to which they were brought up for an assault in trucks. A description of such a soldier, from a German Military Encyclopedia, is worth repeating:

"The Front Soldier of the World War has become a history-making factor in Germany. All his senses tense, ever ready for blow and counterblow, all centered upon himself and upon what he has in common with the comrades he knows as reliable, his heart cannot be shaken by anything. He does not any longer fight with enthusiasm, and he would not dream of going over the top with the song of 'Deutschland uber Alles' on his lips. He battles with a cold matter-offact attitude which does not leave him even in the moments of extreme professional excitement."

Much of the success of the initial breakthrough of General Erich Ludendorff's great spring offensive in 1918 must be attributed to these shock troops.

At the turn of the century, the German fighting man had been given a new dimension when the decision was made to increase the insignificant German Navy into a force second only to that of Britain. Intensive training and superb equipment made up, in part, for the lack of tradition, while the extensive German Merchant Marine and the fishing fleets provided a nucleus of trained seamen. But while the "Nelson touch" was conspicuous by its absence in the cautious Admiral Jellicoe's handling of the Grand Fleet, the shadow of one hundred years of British naval supremacy lay darkly on German naval authorities and seamen alike. A minor British victory in the Bight of Heligoland, less than three weeks after war was declared, in which the Germans lost three light cruisers and a destroyer, with damage to other ships, while British loss was negligible, did nothing to dispel this gloom. But despite a sense of inferiority, the German seamen behaved well, fighting their ships until the last gun was silenced, then going down with loud Hochs! for the Kaiser and Fatherland.

The German captains, in most cases, displayed initiative and skill, while German gunnery was of a high order. There is, however, some question as to whether the individual German seaman was as steady under fire as his counterpart in the Royal Navy. At Jutland, for instance, the shooting of Admiral Franz von Hipper's battle cruisers was superb during the opening phase, but when the British, after suffering the loss of two of their six battle cruisers, and heavy damage to the flagship, began to find the range, German shooting fell off considerably.

The inability to defeat the British surface forces in a fleet action led to the rapid build-up of a submarine fleet and the development of large scale submarine warfare. The U-boat commanders and crews showed great courage and skill, despite the evil (and in great part, undeserved) reputation they won for the torpedoeing of unarmed merchant vessels. (The reaction to this form of warfare depends to a great extent upon "whose ox is being gored," for in World War II the destruction of enemy merchant shipping was considered a highly commendable procedure, and many British and American submariners, particularly the latter, won great fame for the size of their



Infantryman, 1918, in field uniform without cuffs or buttons, wearing steel helmet and carrying gas mask case

"bags.") Because of the acts of a few, however, the German submarine fleet received a universally bad press, and the fortitude of many who braved discomfort and the ever-present danger of an unpleasant death was overshadowed by the sinking (probably quite acceptable by present day atom-bomb standards) of the *Lusitania* and other vessels—of questionable value as targets, but inestimable worth as Allied propaganda.

However, a fleet held long in harbor by threat of enemy action deteriorates rapidly. There was, in the larger vessels of the High Seas Fleet, little of the closely knit fellowship which bound together the officers and men of the smaller, more active vessels submarines, destroyers, etc. The rigid officer-caste had none of the elasticity which enabled equally caste-bound British officers to work, and play, with their men on a more friendly and egalitarian basis. Then, too, the best of the officers and men had been long since drafted into the submarine service. There, where there was strong possibility of dying (199 Uboats were sunk) morale was high, but troublemakers; sea-lawyers, pacifists, defeatists, socialists, and Reds in the battle squadrons had undermined discipline to such an extent that when Admiral Hipper ordered the High Seas Fleet to sea in October 1918 in a "Death or Glory" dash against the Grand Fleet, the crews of several ships refused duty. The orders to sail were canceled and the operation called off. Outbreaks had occurred on several ships as early as May 1917, but the October disturbances were of a far graver nature, and soon burst out in open mutiny. Half-hearted measures to restore order at Kiel, the great naval base, resulted in a triumph for the mutinous sailors. At the same time, the failure, with enormous losses, of the army's spring offensives, and the smashing of the German front line by the Allies in the autumn, had spread defeatism and despair through all but the most dedicated front-line units. Peace was in the air, and the war-weary troops sent to crush the sailors ended by fraternizing with them. The Red flag was raised in many cities and seaports and the revolution was under way.

So, in November 1918, the battered gray columns slogged their way home from the conquered territories, bloodied, but technically, at least, unbowed. They returned to a country torn by civil strife, in chaos. But there was still leadership, much of it military, and from this hard core of surviving militarists, with the help of thousands of returned veterans of the middle or upper classes, organized into the Free Corps, order was restored, though often with blood-shed and violence.

From this paramilitary counterrevolution stemmed contempt for the civil government and its politicians. Also, carefully fostered by the military, there rose, in time, the compelling myth that the German Army had never been beaten, only stabbed in the back by the defeatists and socialists. And from the victorious Free Corps, with their close-knit organizations and disregard for civil authority, it was but a step to the brown-shirted Storm Troopers.

It was upon this foundation of the legendary "undefeated" German Army that the surviving leaders of the German military machine started to build anew. The Supreme War Lord was gone, chopping wood in exile at Doorn, but the General Staff and the remnants of the officer corps remained, willing to temporize and compromise and serve any masters, but fully determined ultimately to build (and control) an even greater army upon the ruins of the old.

The provision of the Treaty of Versailles limited the German Army to 100,000 long-term men (twelve years), including 4000 (twenty-five years) officers. This Reichswehr was to have no heavy arms such as tanks, planes, artillery, and very few of the lighter weapons. The General Staff was to be abolished, and also all military schools, with the exception of one for each of the four arms. The navy was also drastically reduced: Six small pre-dreadnaught battleships, six cruisers, twelve destroyers, twelve torpedo boats, with a personnel not to exceed 15,000. Submarines were verboten.

The following years are a long chapter of expediency, of subterfuge, and, ultimately and inevitably, of politics. The General Staff promptly disappeared, and reappeared immediately under an assumed name, the Truppenamt or troop office. To Von Seekt, the head of this organization, fell much of the task of reorganizing the German Army on its peacetime basis. Every effort was made to tie the new army ideologically with the old. For example, as a link with the Imperial forces, the name of each of the old regiments was given to a company, squadron, or battery, so that the traditions of the old unit might be perpetuated in the new.

For material, the Reichswehr had the pick of the country, and the calibre of volunteers, both officers and enlisted, was very high. It had need to be, for the diminutive Reichswehr was to be the nucleus, the instructors, of a national army which the military leaders of Germany were convinced would someday come into being. It was an army with a different social outlook than the old, and with a far wider basis of understanding and a better relationship between officer and enlisted man. Both were, in many instances, from the same educated elite-the Einjahrige - and in any case, the army leaders had seen the disadvantages of the lack of contact between the officer and men of the old army. During the war, these differences, had, in many cases broken down in the comradeship of the Stosstruppen units, in the inevitable lowering of caste standards among the officer replacements, and, after the war, in the partial democratization of Germany.

As well as thorough training in several branches of weaponry, the soldiers of the Reichswehr were also trained as potential leaders. From private up, each man was to be capable of taking over the job of the man above him. Bearing in mind the success of the shock troops, every effort was made to encourage individual initiative. Even the treaty restrictions were turned to advantage, for because of the small size of the forces, great emphasis was placed on mobility.

The treaty provisions prohibiting certain weapons were, in part, evaded by developing such weapons abroad, and at the same time, training teams of "technicians" in their use. Spain built submarines, and the Swedish ordnance firm of Bofors co-operated in the testing and developing of artillery. The strangest partnership in the Reichswehr's attempts to fool the Allies was that with Communist Russia. An agreement was signed between the two nations at Rapallo in 1933, and in a secret agreement between the leaders of the two armies—the Soviet Army was made available for the Reichswehr for the development and

use of unlawful weapons, while in return, German instructors trained the Red Army. Thus, as certain insects deposit their eggs in the living bodies of their victims, so the Soviet fatherland played host to German artillery, tank, and flying schools; a devil's brood which in time would hatch and all but destroy it.

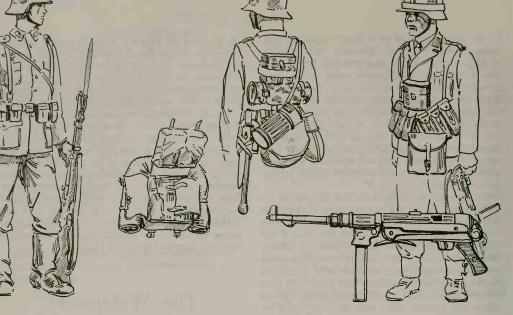
But the Reichswehr was itself to be destroyed, by a group which it had looked upon primarily as a tool; a means of unifying the country (even if under a dictatorship) and so ultimately making possible the rearmament and expansion of the armed forces. The rise of Hitler and the National Socialists — with their hundreds of thousands of Storm Troopers — must have given some of the clearer-thinking military leaders cause for alarm. But the intrigues of Kurt von Schleicher (Seekt had resigned in 1926) did much to hasten the end of the Republic, and the "Bohemian corporal" became Chancellor (January 30, 1933).

The Wehrmacht

In the matter of intrigue and party politics, the generals were no match for the Nazis. Slowly, but surely, control slipped into the hands of Adolf Hitler and the Nazi Party, and in February 1938, he secured the dismissal of Field Marshal Werner von Blomberg (Minister of Defense) and Baron Werner von Fritsch (Army Chief of Staff) and assumed the position of chief of all the armed services himself. The Ministry of Defense was abolished and replaced with a separate command, the Oberkommando der Wehrmacht or OKW. With Blomberg and Fritsch, sixteen senior generals were retired. The Party had triumphed.

By defying the Peace Treaty and openly rearming, Hitler won support of a majority of the Reichswehr. This rearmament was carried on quietly at first, to avoid possibility of foreign intervention, but in 1935 conscription was ordered, and the strength of the new army set at thirty-six divisions, with a strength of 600,000 men. By the end of 1938, there were fifty-one divisions, including five armored divisions, and with yearly classes of over 500,000.

The new class of young officers were not up to the standard set by the Reichswehr—years of Nazi dictatorship had had the effect of lowering intellectual standards. Nor were the short term (two years) NCOs to be compared with the twelve-year men of the army of the Republic. On the credit side: the shortage of officers made it necessary to grant commissions to promising NCOs, finally breaking down



Left: Private, 1939, and pack with blanket roll. Center: Private—field equipment, less pack, but including mess can, camouflaged poncho shelter-half (rolled), gas mask case, haversack, entrenching tool and bayonet scabbard, and cup and canteen. Right: Ser-

geant—infantry squad leader, with binoculars, six submachine-gun clips, map case, camouflage holding band on helmet, leggings, shoes and new-style blouse.

Below: submachine gun

the old officer caste system, while the troops themselves were far better cared for than ever before; better housed and better fed.

The German leaders had given great thought to mobility, and mechanized and armored divisions figured largely in their plans of campaign. The General Staff had always advocated a war of maneuver (the trench warfare of 1915–1918 was no part of their original plan) and Hitler's generals were equally anxious to avoid any such stalemate. Great stress was laid on the Blitzkreig—the lightning war—and besides tanks and motorized infantry, much of the artillery was motorized. Also, in contrast to other armies, the air force was trained and equipped to work in close conjunction with the ground forces.

Envelopment and flank attacks had long been an aim of German strategy, as had the throwing of superior force (if only local) against weak points in the enemy line. This constant probing for the chinks in an enemy's armor, this seeking for a chance to concentrate overwhelming power (with the added advantage of surprise) on small and ever changing "soft

spots," the Germans call Schwerpunkt. In modern warfare it not only applies, (as Miksche, in his excellent book Attack points out) to world strategy, but to the smallest tactical operation.

But the long fronts of World War I, defended in great depth, made such attacks difficult, if not impossible. Impossible by the old methods, that is, but by the employment of masses of tanks, supported by motorized infantry and artillery, and aided by large forces of dive bombers, it might be possible, by breaking in at a number of points, to create flanks to attack. By constantly changing the directions of the thrusts, head-on attacks on points of resistance are avoided, thus allowing the attack to maintain its speed and momentum, surprise is maintained, and the enemy continuously kept off balance. Speed is of the essence - the enemy must be bewildered by the everchanging direction of the thrusts, his strong points bypassed, his concentrations taken in flank or rear, his communications disrupted, and his whole defense system sliced into disconnected fragments. This is the meaning of the Blitzkreig and it got its name, says

Miksche, as much from the zigzag pattern of the assaults as from their speed.

The composition of the German forces differed from time to time and, of course, during hard-fought campaigns, fell very much under strength. The following figures are from a U.S. wartime handbook on German Military Forces, and will serve to give a general idea of the makeup of different standard units.

The basic combat infantry unit or *Einheit* was the platoon (forty-eight men) of four light machine gun teams or squads of ten men each, including one NCO and six riflemen, and a light mortar team. Besides this, one rifleman was often armed with a grenade launcher for his rifle.

Each rifle company had three platoons—an HQ unit—an anti-tank gun section (one NCO, six men, three AT rifles) and vehicles (two NCOs, eighteen men). Each battalion had three rifle companies, a machine gun or heavy weapons company (which contained twelve heavy machine guns and six 81-mm mortars plus vehicles, drivers, etc.), train company with vehicles, and an HQ. Altogether twenty-five officers and 813 enlisted men, with a total of thirty-six light machine guns, twelve heavy machine guns, nine 50-mm mortars, six 81-mm mortars and nine anti-tank rifles.

Three such battalions made up a regiment, plus an anti-tank company with twelve 37-mm AT guns, a howitzer company with six 75-mm and two 150-mm infantry howitzers, and engineers, signals, drivers, etc. — 3159 officers and men all told.

It will thus be seen that each unit, from the platoon up, was self-contained, with rifles, machine guns, and mortars, and, on the regimental level, artillery as well.

An infantry division contained three such regiments, plus an artillery regiment with forty-eight pieces (105-mm and 150-mm) plus more anti-tank guns (50-mm) engineers, signals, etc. — 16,977 men.

A panzer division might consist of some 142 light and medium light tanks, thirty medium tanks, twenty-four armored cars, 2546 motor vehicles, thirty-six pieces of artillery, a motorized infantry brigade, antitank guns, signal services, etc. — 14,373 men in all.

Combat teams or "battle groups" were often used, varying in size from a couple of companies to several battalions. They were usually organized for some specific mission—every effort being made to produce a balanced force, including assault and/or holding and support elements.

Each modern war usually produces one or more outstanding weapons from each side—like the famous soixants-quinze of World War I. On the German

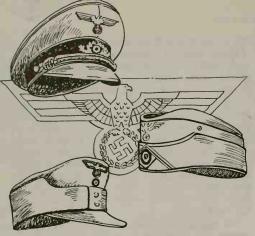
side in World War II, the versatile "88" rates a place of honor. Although originally designed as an antiaircraft (flack) weapon, it was successfully used in the field as regular artillery, as an assault gun, and particularly, because of its high velocity, as an anti-tank weapon. It was highly mobile, could be fired, if necessary (but at ground targets only) from its traveling position, or brought into action in two minutes on the ground. The lighter, and more common, model 88-mm Flak 36 had a penetration (perpendicular) at 1000 yards of over four and one-half inches of armor. With percussion fuse H.E., maximum range was over 16,000 yards. Truly a remarkable gun, as many Americans who served in Europe and Africa can testify.

The territory of Hitler's first victim (not counting Austria and Czechoslovakia) was ideally suited to mechanized warfare, and the industrial and military backwardness of the Polish state made the task of the Wehrmacht a comparatively light one. Nevertheless, ill-equipped as the Poles were (a small air force, only one motorized brigade and a few light tanks) there were plenty of them (some 800,000) and the territory to be overrun was very large.

So when Hitler struck (September 1, 1939), it was with twelve armored and motorized divisions, while the invading infantry amounted to some thirty-two divisions. German divisions mobilized at this time totaled ninety-eight. (In contrast, when the Russian campaign began, German divisions totaled, according to General Heinz Guderian, 205. Of these thirty-eight were in the West, twelve in Norway, one in Denmark, seven in the Balkans, and two in Libya—leaving 145 available for the Eastern front.)

The success of the Polish war (it was all over by the end of the month) gave the German soldier a tremendous boost in morale. The campaign had gone off without a serious hitch. The new weapons had worked well, casualties had been light, and the victory decisive. It was with confidence that the German Army turned its face to the West, and prepared the lightning blows which were to overrun Norway, Holand, Belgium, and Denmark, and bring France to her knees.

Nothing succeeds like success, and the comparatively easy conquest of the above countries brought enthusiasm to a high pitch in the armed services and throughout the nation, (which had received the news of the declaration of war with resignation, in contrast to the frenzied patriotism of 1914). Even the generals—who had viewed the former corporal's assumption of the duties of Generalissimo with grave misgiving, were, at least in part, won over by this



Top: Officers service cap (gold cord and piping for generals). Right: enlisted man's field cap.

Bottom: late pattern field cap

deadly combination of genius and madman. The new weapons and tactics had even been successfully transported to Africa, and it was there that the Afrika Korps, under the justly celebrated Field Marshal Erwin Rommel, made a great reputation for themselves. The airborne troops won great glory, and suffered heavily, in the successful invasion of Crete. Prior to this, another lightning drive had overrun Yugoslavia and Greece.

But the German fighting man was to be given a far more severe test than any he had undergone so far. "Whom the Gods would destroy," goes the saying, "they first make mad," and in June 1941 Hitler ordered his armies into Russia. Hitler, who liked to compare himself with Napoleon, was not unaware of the dread Russian winter, and it was with confidence in a quick victory that the campaign was begun. Again the armored spearheads sliced and probed, thrusting deep into Soviet territory, and cutting off and encircling great masses of Russian flesh and blood. But there was something wrong! The pieces, which should have quivered and died, kept on fighting, striking back and sometimes cutting off the invaders in their turn. Vast mileages covered meant little on the great Russian plains and while Russian losses were undoubtedly enormous (in August Moscow admitted to losses of 600,000 men, 5000 tanks, and 4000 planes), German losses were also high, and there were no Sedans, no Dunkirks; only more miles of dusty plains - and more Russians.

And so the very thing the German leaders had dreaded came to pass, and winter found the Wehrmacht locked in a protracted struggle with a mighty and unbeaten foe. In 1914, on September 10, when the German failure at the Marne was evident, Moltke is said to have told the Kaiser, "The war is lost." At some point in the great struggle in the East—perhaps the day the invaders glimpsed (but only momentarily) the spires of Moscow—perhaps the night the first snow of the Russian winter drifted down—or perhaps the moment when the fateful order went out which started the troops marching onto Russian soil—the Second World War was lost.

The German soldier-fighting at first with confidence, then with misgiving and finally in despairwould yet gain great victories and win much territory. But the sands were running out. The British bastion still held, and the thunder of her bombers was making the German nights hideous; the great arsenals of the New World were turning out munitions in undreamed of quantities, and the forerunners of the huge American armies were already overseas. With the perimeters of their vast empire threatened by land and sea - surrounded by sullen and hostile populations, and with their homeland crumbling in flash and flame behind them, the German soldiers fought on. Where training and experience and pride of service failed - fanaticism took its place. But nothing could stop the march of Germany's enemies. This time there would be no ordered retreat to an unscathed homeland - no proud heroes welcome by the Brandenburg Gate. On all sides the exultant Allies poured in and the once-haughty Wehrmacht, its armies beaten, its warships sunk, and its airplanes smashed - or grounded for lack of fuel - capitulated. The Third Reich crumbled in a welter of blood, treachery, and hate.

Unfortunately, the hand of the German armies had rested heavily on the conquered countries. A horrorstricken world was not about to distinguish between the deeds of the Gestapo and SS troops and those of the ordinary army. In the stench of Belsen and Auschwitz, men forgot Rommel's great fight in the desert; the Bismarck firing to the last; the fighters of the Luftwaffe, taking off in tens, to battle enemies numbering hundreds. It will be many years before the people of Europe will be able to take a calm and unbiased view of the achievements of the German fighting man. They have suffered too much - and too often. Nor are they amused today at pictures of cold-eyed German youths drilling under U.S. instructors-Red Riding Hood teaching the Wolf how to bite! But good soldiers the Germans are, and there are few who have fought against them who would not rather have had them on their own side.



THE RUSSIANS

The early history of Russia, like that of all countries, was one of turmoil and bloodshed. Being outside the sphere of Creek and Roman influence and culture, very little is known of the early years of the Slavic peoples – but the founding of the Russian nation is usually ascribed to Rurik, a Viking, who, in A.D. 862, accepted protectorship of some of the Slavs around Lake Ladoga. This was in the feudal tradition – a strong overlord (although foreign) who could beat off other raiders and bring some sort of order to the warring tribesmen.

The Russian lands, having no natural barriers, were therefore prey to invaders from all sides—from the barbarous Pechengs and Magyars, to the more civilized (but no less cruel) Teutons of the West. The rise of the great trading city-states; Kiev, Novgorod, Smolensk, Rostov, and others, brought more contact with the civilization (such as it was) of Western Europe, while the influence of Byzantium also spread,

through trade and the missionaries of the Creek church. This impact of Byzantine civilization was to have a lasting effect on Russian culture—and many of the characteristics described to the Oriental influence of the later Mongol invaders were actually of Byzantine origin. The slavish court protocol, the seclusion of women, the intrigues and secrecy, and worship of emperor and caste were not Mongol attributes. These nomads were, originally at least, a reasonably free and direct people, and their women sat bare-faced in the highest councils of the steppes. It is to the Greeks of the Eastern Roman Empire that we must look for much that is strange and devious in the Russia that we know, and not to the simple herdsmen who followed Subotai and Batu.

There was, however, in the great trading cities, a sense of freedom and independence – derived in part, perhaps, from the Norse influence, and from contact with other centers of commerce in the West (Narva



Warrior of the sixteenth century

was a member of the Hanseatic League and there were agencies at Pskov and Novgorod). Unfortunately, to a great extent, this free spirit vanished during the long night of Mongol domination and in the gradual spread of the Dukedom of Muscovy. The rival duchies and principalities which went to make up Old Russia were not above using the Mongols of the Golden Horde to further their own ends, and the Dukes of Moscow were particularly adept at this -currying favor with the Tartars by acting as their tax-collectors, and often involving them in local feuds - not hesitating to invoke Mongol aid against their Russian rivals when necessary. Under the protection of the Khans, the Dukedom of Muscovy throve, and when the time came to throw off the Tartar yoke, Moscow was in a position of leadership.

The Mongols were not to be disposed of easily—but a beginning was made by Dmitri Ivanovitch, who by a great victory over the Tartars at Koulikovo on the Don (1380) won the surname "Donskoi." Under a new Khan, Toktamish, the Tartars took speedy vengeance, and two years later sacked and burned Moscow and ravaged far and wide. But Toktamish, in his turn, was defeated by his old ally Timur-i-lang (Timur the Lame, or Tamerlane, as the West called him). Timur also laid waste much of the Russian lands, but the Golden Horde never regained its strength or unity. It was, however, not for another

ninety years that a Muscovite ruler, Ivan III, would openly defy the Khan at Serai. Under a later prince, Ivan the Terrible, the great Tartar strongholds on the Volga, Kazan and Astrakhan, were taken, and the territory annexed to Russia.

The armies of those early years were feudal in character. The petty nobility were mounted, and brought as many armed and mounted retainers as they could afford, or their dukes and princes demanded. There were also crowds of irregular cavalry—Cossacks, Tartars from friendly tribes, Bashkirs, and others. There would also be a host of foot, mostly poorly armed peasants. The army usually marched in five divisions, the van, the main body, the right and left wings, and the rear guard. Each was commanded by two voievodes. The irregulars were commanded by their chiefs and the Cossacks by their atamans.

The equipment and costume of the army was typically Oriental—long robes, high saddles with short stirrups, bows and quivers, lances, and mail or scale armor. Artillery was scarce and was under the direction of foreigners. The whole army, while picturesque, was antiquated and inefficient by Western European standards.

Under Ivan the Terrible (1533–1584) a National Guard, the Streltsy, armed with muskets and battle-axes, was founded. These were not mercenaries, but part-time soldiers, who were paid not only in cash, but in privileges—tax-free trade, for instance. They

Russian Boyar of the seventeenth century



divided their time between drill, regular service in garrison, police work, and their own businesses (they did not live in barracks). Their profession, as keepers of the Czar's peace, was a hereditary one. As in all such cases, forces of this sort tend to deteriorate, less and less time being spent on drill and more on outside activities. Also, any attempt at change would be considered a threat to their ancient rights and privileges, and opposed accordingly.

It was in Ivan's reign that the Cossack, Irmak, with 850 adventurers conquered Siberia for the Czar one of the great feats of arms and endurance of all

time.

By the end of the sixteenth century, foreign officers were in Russia in some numbers, and whole bodies of foreign mercenaries were employed at times. Shortly after the election of the first Romanoff (1613), orders were given to encourage the settling in Russia of gun makers and artillerymen. A Dutchman started a gun foundry at Toula, while others were started by German enterprise in several towns.

Peter the Great

The wars, both foreign and civil, and the dynastic upheavals which preceded the reign of Peter the Great (1682–1725) did little to advance the military art in Russia. The Streltsy Regiments, with their axes and muskets, were still the chief military body—but forces were at work which were shortly to shake Russia out of her Oriental lethargy and face her irrevocably toward the West.

The fantastic character of Peter owed much to the struggle between his mother and her adherents and his energetic and forceful half-sister Sophia. During her regency the young Peter was left severely alone, and grew up under the influence of foreign officers and advisers. From his earliest years he showed great interest in military affairs and amused himself by forming companies from the young people of his mother's household and from peasants of the family estates at Preobrazhenskoe and Semenovskoe. These, with the aid of Patrick Gordon, a Scottish soldier of fortune, were drilled and armed in the foreign manner, and with them he conducted mock battles - so realistic, we are told, that both Peter and Gordon were wounded. The troops of these youthful military games were later organized as regular units-the first "modern" Russian regiments - and the Preobrazhensky Regiment was to become, until the



Streltsy, seventeenth century

revolution in 1917, one of Russia's proudest corps.

The turbulent Streltsy had more than once broken out against the "foreign devils" and their influence, and a showdown between them, the supporters of the reactionary party, and those of the young Czar was inevitable. Peter's insatiable curiosity into all forms of endeavor took him at last to Western Europe where, among other things, he labored in England in a shipyard. This trip abroad was seized on by the reactionaries, who spread rumors that the foreigners had slain the Czar. (Another tale had him captive in Sweden, chained to a stake.) Some of the Streltsy, sent to garrison newly conquered Azof, mutinied, complaining bitterly at having been sent far from their wives and businesses. Peter, hurrying home, seized on this as an excuse to put an end to these riotous anachronisms. Thousands were arrested, tortured and beheaded, Peter himself wielding an executioner's axe. The old order was finished and henceforward Russia would be, outwardly at least, a European state.

The new army which Peter created was made up, like the old, of nobles and peasants. (The term "noble" with its connotation of palaces and vast wealth is often misleading. Like the Junkers of Prussia, many "nobles" had little besides their titles but a thatched farmhouse and a few fields. Perhaps the term "gen-



Infantry officer-time of Peter the Great

try" describes them better, but many, by Western European standards, could not even claim that distinction.) Under Peter, nobility was based on service, and nobles were obligated to serve for life. Instead of leading their own serfs to a campaign, which was usually of short duration, each owner of great estates had now to meet a fixed quota, and the peasants thus recruited were also in the army for life. If, when too old or badly wounded to serve longer, they found their way back to their native villages, it was with scant hope of picking up the threads of their old existence.

The nobles served in the ranks, and, theoretically, a serf could rise to the rank of officer—and so automatically to the status of noble. Some nobles served as privates all their lives, but as a class they had, of course, far greater hope of promotion. The Guard regiments came in time to have a high percentage of nobles in their ranks, and were, in effect, an officer's school for the rest of the army. (Because of this tendency of the nobles to flock to the Guard regiments they acquired considerable power and with very strong political leanings. It was the Guard who

supported Peter's second wife Catherine, after the Czar's death. In 1741 they deposed the regent Anne of Brunswick and put Peter's daughter Elizabeth on the throne. On her death the Guards, who by now were on a par with the Praetorians of the Roman Empire in their king-making, deposed the Germanraised Peter III and installed Catherine II as the Czarina.)

The initial effort of the new army against a European power did not have a happy outcome. Charles XII and his disciplined Swedes inflicted a severe defeat at Narva (1700), but, while many of the hastily raised levies raised the cry of treason against their foreign general (Peter was not at the battle) and panicked, the Preobrazhensky and Semenovsky regiments defended themselves valiantly against all attacks of the Swedes, led by their King in person. Negotiations at nightfall ended the battle and the army retreated with the honors of war.

Peter took the defeat philosophically, and concentrated on improving his forces. Ten new regiments were formed and church bells melted down furnished three hundred cannon. Campaigns in Livonia and on the Neva "blooded" the troops and gave them confidence—incidentally winning important territory, including the site of the future naval base of Cronstadt. At last, Charles struck directly into Russia, an invasion which was to end at Pultowa. After the battle the Czar received the captured generals and drank to them, "his masters in the art of war." But Pultowa was more than a battle won—it brought Russia at one blow into the forefront of the European powers.

During the remainder of the eighteenth century, the Russian Army grew in size and efficiency. The foreign element in the higher ranks was always present, and from time to time there was strong Prussian influence. This was particularly so in the reign of Paul I (1796-1801). Paul, like Peter III, was a great admirer of Frederick the Great-and he "Prussianized" the Russian Army in the worst sense of the word - unsuitable Prussian uniforms, fancy and meaningless evolutions, including the goose-step, meticulous attention to details of uniform and equipment, and an insistence on Spartan living - which sat but ill with the luxury-loving officers. Flogging or exile met with the slightest infringement of uniform regulations, and a regiment which did not perform like an automaton might find itself under orders to march from the parade ground into exile. Understandably, Paul was also to fall victim to an officer-led conspiracy.

Wars under Elizabeth against Frederick the Great produced some bloody battles—among the most noted being the Russian victory at Kunersdorf (1759). Victories over the greatest captain of his time were scarce, but on other, less successful, occasions, the world took note that the Russian infantry was extraordinarily stubborn and could take an unbelievable amount of punishment without breaking.

Wars with the Turks also occupied the Russian armies, and conquests in the Ukraine and the Caucasus, and the partitions of Poland greatly enlarged the Russian Empire. No great changes in the military system are to be noted, although in 1762, Peter III, during his reign of a few months, abolished the law of Peter the Great ordering the nobles to consecrate their lives to the service of the state. They were still expected to send their sons into the army, but as officers—having first gone to one of the numerous cadet schools which now sprang up.

The Napoleonic Wars

The century saw the rise of Russia's greatest military leader, Aleksandr Vasilievich Suvorov. Born in Finland in 1729, he joined the Czar's army as a boy and fought against the Swedes, Prussians, and Poles. As a major general in the Turkish campaign of 1773–74, he won great fame, and again in the Turkish war of 1787–91. For his victories in Poland in the next few years, he was made field marshal. When his sovereign Catherine II died in 1796, Suvorov lost a friend. The new Czar, Paul I, dismissed the hero in disgrace for remarking that "There are powders and powders! Shoe-buckles are not gun carriages, nor pigtails, bayonets; we are Russians, not Prussians."

At the request of the British and Austrians, he was called out of retirement (1799) to lead the Allies against the French Republican armies in Italy. In contrast to the stiff, unimaginative maneuverings of the Allied leaders, Suvorov, with his unorthodox strategy and hit-hard-and-often tactics was the only man who could defeat the equally unorthodox generals of the Revolution. And defeat them he did. At Cassano, at Trebbia, and at Novi he beat the French forces out of Italy. Only a force under General Jean Moreau remained in the Maritime Alps and around Genoa. But, as in all coalition enterprises, trouble developed between the Allies. The Austrians were unco-operative, and the Council of Elders at Vienna, the Hofkriegsrat, tried to entangle the Russian leader in red tape.

Suvorov was ordered to Switzerland to join an Austro-Russian army there. As might be expected, the Austrians had neglected to furnish promised transport mules, and time was lost in gathering some in from the countryside. His crossing of the Saint Gothard Pass and the incredibly difficult country beyond, against determined French opposition, is an epic. But even as his men toiled over the mountains, the army he was to reinforce had ceased to exist! While Suvorov was laboring over the snowy passes, a French army under the command of Marshal André Masséna had fallen on the Allies and decisively beaten them, despite the most desperate valor on the part of the Russian infantry. The crossing of the Saint Gothard was as nothing to the trials which now faced Suvorov's Russians. Cut off and surrounded in the Alps by vastly superior numbers, the little seventy-year-old marshal beat a magnificent retreat over snowelad mountains and glaciers, finally bringing the remnants of his gallant troops to safety. It was the old soldier's last campaign. He died a few months later, in disgrace, having once more lost his ungrateful sovercign's favor. Less than a year later the Czar was to perish, and his son, Alexander I, raised a statute to the great military commander. Today the Order of Suvorov is awarded to those Soviet commanders who distinguish themselves in an offensive.

Much to Suvorov's disgust, he and Napoleon never met in the field, but the Emperor of the French was soon to discover at first hand the fighting ability of the Russian peasant. Austerlitz was another Allied effort, and a brilliant victory for Napoleon - but at Eylau he received a check. All day Russians and Frenchmen grappled in blinding snow and bitter near-zero cold, and at the end of the day, the Emperor was glad to hold his positions. That night the Russians drew off, but losses were very heavy on both sides - 18,000 Russians and Prussians (a small force of whom arrived late in the day) and 15,000 French. Napoleon also lost five of his precious Eagles, which must have added to his respect for the Russian soldier. Heilsberg showed what Russian soldiers could do when entrenched, and while Friedland was a disaster, the gallantry of the Russian horse and foot did much to offset the poor tactics of their leaders.

Not for 130 years were the Russian soldier and the Russian people to win such fame as they did in 1812 when Napoleon launched his ill-fated Russian campaign. Granted that the appalling lack of staff work and the breakdown of the supply systems had inflicted grievous casualties on the invaders before they ever crossed bayonets with a Russian. Nevertheless, the heroic "scorched-earth" policy of the natives, and



Grenadier, Cossack and Hussar-time of Napoleonic Wars

the stubborn valor of the Russians at Smolensk and the bloody field of Borodino, did much to defeat the French, before cold and hunger and the Cossack lances had turned a retreat into a death march. Thirty thousand of the Grand Army fell at Borodino, including forty-nine generals and thirty-seven colonels. "The beast," said Tolstoy, "is wounded to death" — and so it proved.

The Russian nation had been torn by many dissensions but, as always when faced by an invader, the whole nation united. Great landowners, fiery young liberals, traders, and moujiks—diverse groups who, at best, eyed each other with distrust, sprang to defend Holy Mother Russia. Completely foreign to the Western European was the manner in which noble and peasant alike put the torch to their dwellings and barns, so as to leave nothing for the invader. The Governor of Moscow had left a notice, in the words of the French soldier and diplomat, the Marquis de Caulaincourt:

". . . . on the signpost that marked the road into his estate at Wornzowo, a short distance from Mos-

cow. This notice was brought to the Emperor, who turned the whole thing to ridicule. He joked a lot about it and sent it to Paris, where doubtless it produced, as it had in the army, an impression quite contrary to what His Majesty expected. It had a profound effect on every thinking man, and won the Governor more admirers than critics—though only, of course, for the patriotism he had shown in sacrificing his house. This is how the notice was worded:

"For eight years I have improved this land, and I have lived happily here in the bosom of my family. To the number of one thousand seven hundred and twenty the dwellers on my estate are leaving it at your approach, while, for my part, I am setting fire to my mansion rather than let it be sullied by your presence. Frenchmen!—in Moscow I have abandoned to you my two residences, with furniture worth half-a-million roubles. Here you will find only ashes."

A destroyed mansion might be amusing, but the burning of Moscow was no joke. Much of the city went up in flames and any plans Napoleon may have had for wintering there went up with it. To the hardships of the road and the casualties from the fierce rear-guard actions were added the increasing severity of the attacks by the numerous partisans. Singly or in bands, they attacked the French line of march, capturing convoys and cutting off foragers and stragglers. Some of these bands, such as those of Davydof, Benkendorff, and Prince Kourakine were large—that of Dorokhoff numbering 2500 men. To these were added the numerous bodies of Cossacks, whose name seemed to strike more terror than their accomplishments might warrant.

These warriors of the steppes - of which more later -were excellent irregular cavalry, invaluable as scouts, great raiders and skirmishers, and able, in those days of short-range weapons, to hang around an enemy formation in clouds, keeping them constantly on the alert, and snapping up any who strayed or straggled. Used in regular formations, and against unbroken troops, they lost much of their effectiveness. The French Baron de Marbot and other regular officers do not seem to have had a very high opinion of them. Caulaincourt wrote: "They are certainly the finest light troops in the world for guarding an army, scouting the countryside, or carrying out skirmishing sallies; but whenever we faced up to them, and marched against them boldly in a solid body, they never offered resistance, even when they outnumbered us by two to one. . . ." And again: "The danger was not in the attacks of the Cossacks, which our soldiers, when in platoons, never feared. . . ." However, the numerous mentions in his account show the great effect these horsemen had on the outcome of the campaign. The sight of the ever-present knots of watching horsemen dotting the plains must have reminded the half-starved, half-frozen men of the Grand Army of packs of hungry wolves.

The counterstroke of the Allies took the Russians through Europe to Paris itself. Lutzen, Bautzen, Dresden, Leipzig, and the battles of the French campaign of 1824 - the Russian soldier played his part in all of them. Despite some Eastern anachronisms, such as the Bashkirs, whose appearance, armed with bows and arrows (Cupids, the French called them) on the battlefields of Germany caused the enemy more amusement than alarm, the Russian army was now as up to date as that of any other power. Russian artillery was powerful and well served, and the cavalry arm effective. It was with such an army that the Czars, now that the danger from the West was ended, began the steady "March Slav" which would take Russia through the Caucasus, and to the borders of Persia, Afghanistan, and China, and for a short time. the North American continent.



Private and non-commissioned officer of the Preobrazhensky Regiment, 1830

The Frontiers

The movies have made much of the conquest of the American West. Bloodier by far, and just as romantic, was the Russian conquest of the East. Frontier quarrels with Persia led to a war (1826-1828) which resulted in the acquisition of two border provinces and a large indemnity. At the same time the old question of the Christian lands of Turkey in Europe came once more to a head. Alexander I had done little to help these oppressed peoples, but Nicholas I (1825-1855) took a firmer stand. Following intervention by England and France, the Czar declared war on Turkey. Profiting by the rebellion of the Janissaries (the famous corps of mercenaries who had finally become so powerful as to threaten the power of the Sultans), the Russian troops occupied Moldavia and Wallachia, and took Adrianople. In the east, Kars and Erzerum were taken, and the Sultan sued for peace.

Russia had had, for some years, footholds on both the northern and southern slopes of the great Caucasus range. During the first half of the nineteenth century, there was almost constant warfare with the



Circassian Escort of the Emperor, 1842

fierce tribesmen of the mountains. Most noted of the many chiefs who tried to stem the Russian advance was Schamyl—fanatic Moslem warrior-priest who led a holy war against the infidel invaders. For twenty-five years he held his mountain fortresses against the best generals the Russians could send against him. It was not until 1859 that he finally submitted. During this fierce struggle as many as 200,000 Russian troops were stationed in the Caucasus, of whom many more died of disease and neglect than from the sabres and bullets of the mountaineers. Russian leaders are notorious for being prodigal of their men; losses can always be replaced from the inexhaustible supply of manpower.

During the same period, Russian columns pushed east across the steppes of Turkestan against the Khan of Khiva. Heat, drought, and disease took their toll of the invaders, but in time the lands of Central Asia became thickly dotted with Russian forts and outposts, against which the horsemen of the steppes and the rugged mountain country carried on a perpetual guerrilla warfare.

Even more than in the American West, supply was a major problem, and the ultimate success of the Russian Army owed much to the work of the engineer corps, who built roads and laid track across waterless deserts and through gloomy mountain defiles.

The winning of the East was interrupted in 1854 by a war with England, France, and Turkey. The combatants being separated by half of Europe, the war was fought in one of the few areas where Russia could be assaulted, with some chance of success, from the sea. The main battleground chosen was the Crimean Peninsula, and Allied troops landed near Eupatoria. The Russian defeat at the Alma, which opened the way to Sebastopol, came as a great shock. Forty years of victories over Asiatics had made the Russians overconfident. While the Russian soldier fought with his customary stubbornness, especially in defense of the great naval base and fortress, he had never had to face the English musketry, made more deadly in this war by the recent introduction of Minié rifles and of the Enfield rifled musket. This latter (which The Times correspondent wrote, "smote the enemy like the Destroying Angel") made the old conflict between line and column even more unequal. The impression, gathered from eyewitness reports of the Russian troops of this period, is of great gray masses of men, patient and stolid under fire, without much élan and with very little initiative, even at the regimental level.

The massive attacks on the British lines at Inkerman is a good example. There, 42,000 men in power-

Caucasian—with cartridge cases on breast of long-sleeved national coat, 1840





Grenadier cap, shako, and helmet, 1845

ful columns, with the advantage of surprise (outpost duty and scouting was appallingly slack on both sides) failed to overwhelm and defeat less than 8000 British infantry and some 7000 French, of whom only about half were actually engaged. Time and again Russian columns numbering thousands allowed themselves to be charged and driven back by small bodies of company strength. In the end, the Russians retired, leaving some 12,000 dead and wounded, yet had they displayed but a fraction of the dash and initiative shown by even the British NCOs, the day must have ended in a crushing Allied defeat.

It is true, as the English historian Alexander Kinglake wrote, when comparing the prowess of the English soldier with that of the Russian, that ". . . the first had been one in a chain-gang of weeping peasantry torn out of their homes by some Ukase; the other, a sturdy recruit, choosing freely the profession of arms . . ." To the majority of Russian peasants the army was a thing of horror. The unfortunates who were handed over by their masters for a life in the ranks were objects of pity. Such a fate was considered worse than exile, for at least in Siberia a man's wife and children could accompany him. This attitude was reflected in that of the landowners, who handed over for service those serfs they could best spare, and those they wished to punish severely. As Basseches says, in his The Unknown Army, ". . . by the middle of the nineteenth century the Russian military system had tended automatically toward a selection of the unfit."

Nor did the fact that the Russian soldier was a "long service man" (in the fullest sense of the word) make him the equivalent of the professional soldier of other armies. The wastage of disease and battle was so great that a steady stream of fresh conscripts were constantly being herded into the ranks. At the same time, the Slav temperament, unlike that of the more methodical European nations, did not, in many cases, lend itself to the making of the ideal army officer.

Under the circumstances, the Russian soldier behaved surprisingly well. Torn from his family into lifelong service (later reduced to twenty-five years), beaten and bullied by officers (whose ignorance sometimes almost equaled his own), often poorly led by generals to whom the life of a common soldier meant nothing; still he could be counted on for stubborn resistance, and on many occasions, savage assaults, carried out in the face of heavy loss. It is to be doubted if he was ever sustained by any personal affection to his officers - such as often animated the soldiery of other nations; but pride of regiment, and a dog-like devotion to Holy Russia and the "Little White Father" caused him to be a foe to be reckoned with. They were stout men who worked the guns and held the ramparts of Sebastopol-while, in a later war, the troops who stormed the Turkish redoubts at Plevna (1877) against sheets of fire from the breechloaders did all that troops of any nationality could have done.

The Russian Army of the mid-century period was much under German influence and of officers of German descent (many of them the so-called Baltic Barons). So much so that General Yermolov, a Russian of the old school, when asked by Nicholas I what reward he wanted for his victories in the Caucasus, replied: "Your majesty, promote me to the status of a German." The strange mixture of liberals and autocrats; newly assimilated foreigners and natives; of ancient and modern - of the electric telegraph and the knout; of Occident and Orient; which went to make up the empire of the Czars can perhaps be likened to the walls of a hive. Inside, the mass of bees buzzed and murmured - content to be robbed of the fruit of their labors, if it was done earefully and aceording to custom, but a dire menace if aroused and let free. The hive had been overturned before under Stenka Razin (1670) and Emelyan Pugachev (1773). The masses, at least part of them, had risen in class war - and the government, seemingly so allpowerful and absolute, lived in constant dread of even more destructive outbreaks. The army, officered for the most part by members of a class who had everything to lose by the overthrow of the existing

order (and mindful of the fate of such liberals as the Decembrists of 1825) was the mainstay of the regime. Because the rank and file was made up exclusively of peasants, who might reasonably bear resentment against the government, discipline was harsh, and every step was taken to make the common soldier a mere unthinking automaton. Also, efforts were made to maintain and to further increase the gulf between the officer-noble and the soldier-serf. The very form of address —"honorable" or "most honorable" on the part of the ranks, and the familiar "thou" of the officer served to stress the gap between ruler and ruled.

The defeats of the Crimean War, which had also involved naval operations in the Baltic and a campaign on the Danube, had badly shaken the Russian Empire. The antiquated methods and general backwardness of the country showed up glaringly in its inability to keep up the contest with the Western powers. Reforms were badly needed and the new Czar, Alexander II (1855–1881)—the reactionary Nicholas I died before the fall of Sebastopol—prepared to grant concessions.

The most far-reaching was that which freed the serfs (1861). In 1870, universal military training was introduced and the length of service reduced to sixteen years. Education brought privileges and the reduction of service. Educated men in the ranks ("volunteers" they were called) were set apart by special insignia. They were addressed by the ordinary soldier as barin—a respectful word derived from boyer.

The drafting into the army of merchants, mechanics, and others introduced a new element—one not so docile nor as easily overawed as the serfs. As time went on, the need for more officers brought an increase in the number of military and semi-military schools. The upper classes could not supply enough students for these schools, and a sizable proportion were from the middle classes and even some from the peasantry.

The Russian officer class has always played a strange and anomalous role in Russian life. While in part representing the reactionary landowners it was also, as one of the few educated bodies in the Empire, a stronghold of the intelligentsia and liberalism; and with the growth of intellectualism in Russia, there naturally arose a strong feeling against the absolutism of Czarist rule.

A dictatorship, whether by Czar or commissar, cannot tolerate the growth of a class of intellectuals who will inevitably arrive at conclusions hostile to the regime. The answer to this is, of course, the secret police, and the Okhrana of Czarist days were kept

busy indeed. But while the intelligent civilian might go in fear of exile or the knout, the radically minded officer, because of his position, was cloaked in a degree of immunity, and the officer corps always had within its ranks a considerable number of liberals, if not of revolutionaries.

Unfortunately for Russia, and for the rest of the world, the reprisals by the regime were met by equally savage reprisals from below. Revolutionaries, popularly lumped under the heading of Nihilists, began a series of terrorist activities, and the extremes of Russian thought came to be symbolized by the autocratic ruler, surrounded by whip-wielding Cossacks and the secret police on one hand, and bearded fanatics with smoking bombs on the other. The work of cooler-headed ministers in between these extremes went almost unnoticed. By the efforts of the liberalminded Reform Commission, which the Czar had appointed, Russia was on the eve of a constitution, when Alexander II was killed by a bomb in St. Petersburg in 1881. Naturally enough, his son Alexander III viewed liberalism with a jaundiced eye-and while industrialism, with all its attendant evils in an ultracapitalist society, grew apace, the reforms which might have given the country a broader base of social equality were lacking.

Through all this the army remained much the same. Outwardly they received proofs of the Russification of the nation by the Russophile Czar in the shape of new uniforms of a traditionally Russian pattern. Out went the Prussian type dress, with the spike helmet of Crimean War days, and the men received the familiar buttonless blouse which has remained almost standard to this day. Inwardly, whatever currents were set up by the turmoil in the nation at large, were not apparent in the ranks. The severe discipline—the insistence on the forms of officer-superiority and a complete and unthinking obedience to authority, kept the men in line.

As the army was frequently called out to quell riots and the increasing number of industrial strikes, this put a severe strain on the loyalties of men sometimes called upon to shoot down their own kind. To relieve such tensions, Cossacks were usually used for such duties—as being a class somewhat removed from the average Russian soldier-subject.

Just as the defeats of 1854-55 brought on much unrest and disorder, so did the disasters of the war with Japan (1904-5). The nation had grown; its problems were greater; the defeat, therefore, by a small Asiatic power, was all the more shocking. In consequence, the revolution of 1905, when it came, was far more widespread, involving both army groups



Uniforms of the Russo-Japanese War

and men of the Black Sea Fleet. The causes of the war stemmed from Russia's intrusions into both Manchuria and Korea, where her interest clashed with those of the rising empire of Japan. Taken as a whole, the disparity of men and material was enormous, but the Russian provinces of the Far East were only linked to the West by the newly completed singletracked Trans-Siberian Railway. This 5800 mile line, besides being (according to an experienced American traveler) so poorly laid, with light rails on an inferior bed, that twenty miles per hour was the maximum allowable speed, was broken by Lake Baikal. The lake, which at this point was some forty miles wide, was crossed by ferries in summer and by sled or on foot in winter. It made a disastrous bottleneck and severely hampered the vital Russian line of communication. Troops were usually marched across the ice, but the bitter sub-zero cold and the danger of crevasses, which formed frequently, with thunderous reports, made the crossing hazardous. One regiment wandered off the track in a blizzard and lost six hundred men in the treacherous ice.

The Russian forces in Manchuria and eastern Siberia at the beginning of the war amounted to some 262,000 men. The total war strength of the nation was reckoned at about 5,756,000 men. The general

army service was then eighteen years—four with the colors and fourteen in the reserves. Education, as before, had its privileges and might reduce service to one year. In peacetime the yearly class of conscripts numbered some 880,000 twenty-one-year-olds—three times as many as necessary. There were then plenty to pick and choose from, and exemptions for physical and domestic reasons were made. The equipment was on a par with most European armies, but there was much graft and inefficiency in the methods used to procure supplies, and favoritism and nepotism of all kinds in the government bureaus.

There was still an Oriental flavor to the Russia of those days—cliques and cabals at work behind the scenes and a characteristic desire to cover up short-comings with a façade of efficiency and accomplishment.

The war began badly (less than forty years later history was to repeat itself, and another war was to start in the same way) with a surprise attack by the Japanese Navy on a fleet which, though knowing war was imminent, lay unready and almost unguarded. Not having such a clear blueprint of Japanese behavior as did the authorities at Pearl Harbor, the Russians at Port Arthur may escape our censure—but

it was a disheartening beginning, and a presage of more evils to come. The small but efficient and superbly trained and equipped Japanese army proceeded to defeat the Russians in engagement after engagement. Out-generaled and out-fought and, at the beginning, outnumbered, the Russians were beaten back north of Mukden, while large Japanese forces strove to take Port Arthur.

There was much in the costly siege of that fortress which gave serious-minded soldiers food for thought. The inner defenses of the place had never been completed, but General Anatoli Stoessel, the Russian commander, had supplemented the permanent works with a tremendously strong system of trenches and redoubts - with numerous searchlights and machine guns, and considerable use of barbed wire. The Japanese had, one: No conception of the difficulty of assaulting such a fortress system, defended with modern small arms and artillery and, two: No idea of how stubbornly the Russian soldier could fight behind defensive positions. They learned about both in a siege which, while ultimately successful, lasted over five months and cost them close to 100,000 casualties. As a preview of the trench warfare of ten years later, it is interesting to note the use of hand grenades and improvised trench mortars.

While thrown back into Manchuria, the Russians were by no means beaten. Troops were arriving from the West at the rate of 30,000 a month, while the Japanese were nearing the end of their resources. The deciding factor was the overwhelming defeat of the Russian fleet at Tsushima, one of the world's most decisive battles. The gallantry of the Russian sailors was beyond all praise. The magnificent defense of the battleship Suvorov especially winning the admiration of the Japanese. Semenoff in his Battle of Tsushima wrote that:

"The mainmast was cut in half. Her foremast and both funnels had been completely carried away, while her high bridges and galleries had been rent in pieces; and instead of them, shapeless heaps of distorted iron were heaped upon the deck. She had a heavy list to port, and, in consequence of it, we could see the hull under the waterline on her starboard side reddening the surface of the water, while great tongues of flame were leaping out of numerous rents." Yet she fought on for almost two hours more, defying, with a few guns, thirteen cruisers, and succumbing at last to the torpedoes of a flotilla of destroyers. No less heroic was the end of the Borodino. Battered and on fire, she kept her place in the line until a shell exploded a magazine. "Already heeling over to starboard, she kept on firing, and at the very moment of turning over on her side she got away a shot from her after turret," wrote an eyewitness.

No seamen could have behaved better-yet these were the same men who, in the belief that they were undergoing a night torpedo attack, had precipitated an international crisis by firing wildly into a fleet of English herring drifters - and this some thousands of miles away from the nearest Japanese base! The Pacific squadron was better trained, but Semenoff tells of the blind panic in the fleet after the Pobieda had struck a mine: "The formation was lost; the whole squadron got mixed. Suddenly guns went off everywhere. . . . What was now going on about us was incredible. Mingled with the thunder of the guns came cries such as, 'It is all up with us!' - 'Submarines!' 'The ships are all sinking!' - 'Fire, Fire!' 'Save yourselves!' The men completely lost their heads. They hauled the hammocks out of the nettings and tore the lifebelts out of each other's hands . . ."

Some months later many of the sailors in this squadron were fighting magnificently in the land defenses of the fortress!

It is interesting to read in Novikoff-Priboy's Tsushima, of the amount of unrest there was in the Russian Navy at this time. The author himself had been in jail for "political" offenses, and his account is heavily biased - but there was unquestionably a great feeling of defeatism and much outright revolutionary feeling - even among some of the officers. This was fanned by reports reaching Rozhestvenski's fleet of the riots and strikes at home, especially the massacre of workers outside the winter palace in January 1905. There were undoubtedly many aboard the Oryol with little love for the service or for the Czar, yet they fought their ship well at Tsushima, keeping her guns going and her engines turning over until she was a flaming wreck. In the heat of battle many grievances and injustices may be forgotten.

In contrast was the action of the crew of the cruiser *Potemkin*, of the Black Sea Fleet, who mutinied, seized the ship, steamed out of the harbor of Odessa under the guns of the rest of the squadron, and finally brought their vessel into a Rumanian port.

The Russian Army doubtlessly profited by the lessons of the war with Japan, but there remained glaring faults which were to spell disaster in 1914. In excuse it may be said that it is most unlikely that these faults, many of which were inherent in the regime as a whole, could have been cured even in thirty years—let alone ten.

For one thing, the annual call-up was small, as compared to the actual numbers of young men available. As the government had an aversion to giving military training to more people than actually necessary, a great majority of the citizens of arms-bearing age had no military training whatsoever. There was also a shortage of reserve officers, and no efficient system of military training camps where the new armies could undergo even a rudimentary training before being thrown into the firing line.

Even more serious was the fact that, while industrialization had increased greatly, the country was still not equal to the task of carrying on a war effort commensurate with the size of the armed forces. Graft and inefficiency had been rampant in the procurement and distribution of war materials—consequently, when war came and the army was suddenly expanded, there was a grave shortage of munitions of all kinds. Even communications were hampered—there was a shortage of wire and of telephone and telegraphic equipment, while what little wireless gear there was, was unreliable. Motor transport was unheard of. Lacking good roads, it would have been almost useless, in any case. At the outbreak of the war the peacetime army numbered some

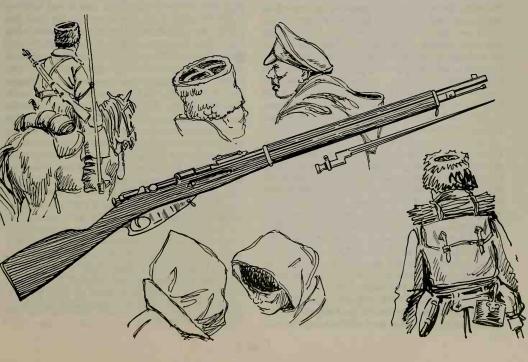
1,100,000 men and 42,000 officers. From 1914 to the Revolution about 15,000,000 were mobilized. Only a huge and well-organized industrial system could have supported such a mass of men. As it was, troops went into battle unarmed — to pick up rifles from the fallen.

World War I

The Russian Army began the war with less than half the German strength in artillery—and stocks of ammunition for the existing batteries were so low that guns were rationed to a few shells per day. Lacking munitions, the partially armed gray-coated hordes were sent in to win battles in the only way left to them—with the bayonet, if they were lucky enough to have one. (The Minister of War, an appointee of the Czar, who boasted that he had not read a military textbook for twenty-five years, was a great believer in the bayonet.) To their everlasting credit, they con-

Russian Mouzin magazine rifle—model of 1901
—also known as the "Nagant" Cal .30, 5 shot, with

four-fluted, sleeve and lock type bayonet. This was always carried fixed—no scabbard being provided



tained large armies of Germans, Austrians, and Turks, and, on occasion, were able to mount successful offensives. The drive into Galicia in August 1914 netted 200,000 prisoners, and while the attack on East Prussia (made prematurely, on the insistence of the French), ended in disaster at Tannenberg, it had the desired effect of drawing off German strength from the West during the crucial drive through Belgium to the Marne.

But flesh and blood could not prevail against steel and high explosives. Short of everything except raw recruits, the Russians were forced back and back. Losses were enormous—at the end of war, estimated casualties, including prisoners, totaled over 9,000,000, of whom 1,700,000 were killed. The lack of military supplies added to the growing hopelessness of the soldiers, while shortages of food and fuel created mounting discontent at home. The weak Nicholas II, dominated by his half-German wife and her half-mad adviser, Rasputin, was not the man to deal with a nation in crisis.

Over the years the Autocrat of all the Russias, egged on by his wife, had fought every attempt at a workable form of constitutional government. The Dumas, or parliaments (the first, elected on a narrow franchise, was called in 1906, as a sop to the unrest following the abortive revolution of the preceding year) were kept powerless. But the insanity of the Czar's insistence on his divine will, the futility of his appointed ministers (Rasputin was dead - his powerful body poisoned, shot, kicked, beaten, and finally drowned), and the general hopelessness of the situation - political, military, and economic - had estranged all but a few. The Czar's abdication and the formation of a constitutional government was the goal of noble and bourgeois alike, while the Far Left plotted the overthrow of both.

The end came in March 1917. A bitter 40 degreebelow winter, scarcity of bread, labor conditions, a general feeling of disgust with the ruling classes, with the war, with everything, suddenly gripped the working populace of Petrograd. The hive tipped at last. But the bees would have been smoked back into docility once more - except for one thing; the army was no longer loyal to the Czar. On March 11, a company of the Volinsk Regiment - ordered to fire on the mob, fired into the air. Later that day they did fire into the crowd, but next morning, after a night of argument, the regiment marched out behind its band; not to suppress the revolution, but to join it. The garrison of Petrograd was over 160,000 strong, but many of the men were middle-aged reservists, from the same class - even the same districts - as the people they were to shoot down. One after another, the regiments went over to the revolution. The famous old names—the Preobrazhensky, the Semenovsky, and the Ismailovsky—all joined the revolt. Even the Cossacks—those hereditary guardians of autocracy—declared for the people. And so, in a day, an ancient Empire came to an end.

But the end was only a beginning. Ahead lay polities, more revolution (the Bolshevik one, this time), and weary years of civil war. And keyed to all this, of course, was the army. Without it no regime, liberal or communistic, could survive.

To oversimplify a complicated situation, there were at first two governments in Petrograd – the Duma (moderates), and the Soviet, or council of workers and soldiers (all the way from "pink" to deepest "red"). It was this latter group who issued the famous – or in-famous – Order No. 1. This, in effect, took most of the power away from the officer corps and vested it in soldier's councils and the Soviet. To an army of war-weary peasants this was license to do what they wanted. What they wanted most was to go home, which they proceeded to do in tens of thousands – some 1,500,000 deserting in a few months. In many instances they also vented their spleen on the most unpopular of their officers, now almost helpless.

The take-over of the government by the small but tightly organized Bolshevik party under Lenin is history. With their avowed aim of destroying the Imperial Army as a fighting force, with their agitation among the troops and their slogan of "Peace, Land, Bread" they brought about the complete disintegration of the forces still fighting on the Eastern front. Even the signing of the humiliating treaty of Brest-Litovsk was not considered too high a price to pay for an end to the war. The old army had by now ceased to exist—had wandered off home to enjoy the fruits of the promised Utopia. Its place was temporarily taken by the Red Guard—groups of factory workers and Bolshevik sympathizers under elected leaders (titles and insignia of rank had been abolished).

But the warring nations did not hasten to proclaim the Brotherhood of Man, nor lay down their arms, and it became apparent that the new Revolutionary Russia must be able to defend itself. And so the Red Army was born. The official birthday is given as February 23, 1918—a date when Red volunteers fought off Germans advancing toward Petrograd. A more accurate one might be April 22, when Trotsky, People's Commissar for War, introduced compulsory military recruitment.

The Red Army

The Bolsheviks had their problems. The peasants, who, as usual, would make up most of the army, had no desire to put on uniforms (most of them having just taken theirs off) and no affection for a worker's government who seized their produce without compensation and who talked of "Communising" the land. A worse headache was the shortage of officers. Hundreds had been murdered, and thousands more had fled into exile, or into the ranks of the "White" armies of the counterrevolution. Hastily organized officer schools supplied increasing numbers - 1700 in 1918, 12,000 in 1919, and 26,000 in 1920 - but for experienced men and teachers for the military schools and academies, the Reds had to turn to those ex-Czarist officers who had remained in the country. The part played by these officers of the old regime is seldom fully realized. In 1919 they accounted for fourfifths of the commanders of the Red Army, and held most of the high commands. The first Commander-in-Chief, Vatsetis, was a former colonel, followed by an ex-army general, Kamenev.

There was violent opposition to the use of these officers of the old regime (military specialists, they were called), but Trotsky, the real father of the Red Army (although he is anathema in Russia today), upheld his use of them. The Bolsheviki were thus faced with a reluctant rank and file (of whom, in 1920, scarcely one in twenty were Communists) and an officer corps made up in great part of ex-Czarist officers. To counter the first, Communist cells were organized, acting as informers, propagandizers, and also as shining examples of loyalty to the regime. There were also units of Communist shock troops rushed in to bolster the front where most needed. To watch over the leaders, political commissars were assigned to commanders at all levels. These had equal powers, and had to countersign every order. Dual command is never efficient, but the exigencies of the situation demanded a solution, and this was the best, and probably only, answer.

The end of 1920 saw the last White army (Wrangel's) driven out of European Russia (the Far East was not completely won until 1922, when the Reds entered Vladivostok). While the Civil War must have tried the souls of many of the Red soldiers, the war with Poland in 1920 took on a national character and attracted many who up to now had refused to serve with the Red Army. A military council was

formed, which included several ex-Czarist generals, Aleksei Brusilov among them. New divisions were hastily raised, and the fighting strength on the Polish front was in the neighborhood of 200,000 men. Equipment was still spotty and there seems to have been the usual shortage of artillery and ammunition.

Despite the national emergency, there were many desertions, and morale was not always of the highest. From French General Maxime Weygand's account of the Polish War: "A captured officer [Russian] related that he had been under close supervision throughout and twice threatened with shooting. The Red Army as a whole was living under a system of terror. A captured Russian soldier said: 'In the old days we went forward out of discipline. Now we are doing it because we are scared to get a bullet in the back!'"

While the exhausted country was trying to pull itself together after eight years of war, the shape of the new army was being discussed. The Civil and Polish wars had brought to the fore many new commanders. Some, like Simeon Budenny, an ex-cavalry sergeant, and the brilliant young Mikhail Tukhachevsky, ex-officer of the Guards, had had some military experience – others, like Klementiy Voroshilov and Mikhail Frunze, were gifted amateurs. There was no longer the pressing need for non-Communist officers of the old regime, and hundreds were demobilized.

The new army was to be part regular, part territorial, with most of the regulars being stationed on the frontiers. The system of military commissars was retained. Service began at twenty-one. Some called up served from two to four years in the regulars—others for lesser periods in the territorial forces. Also, the Mohammedan, North Caucasians, the Kalmucks, Kirghiz, Turkmens, and others, who had been exempt from service under the Czar, were now included in the compulsory service.

Pre-military training for young people was offered by the Society for the Promotion of Aviation and Chemical Defense, OSOAVIAKIIIM, formed in 1927.

The task of indoctrinating a shattered and warweary nation of peasants into a modern army was a difficult one. The country was in shocking state. Backward to begin with, the years of civil war had wrought great destruction. Brigandage was rife, and the resistance of much of the population to forced economic changes brought constant threat of riots and rebellion. After the organized breaking-down of discipline in 1917, it was doubly hard to reintroduce it, and the veteran revolutionaries resented attempts to do so. However, Frunze made a start—uniforms were to be worn both on and off duty, smartness insisted on, and more emphasis was placed on drill.

The country was still in poor shape industrially, and it was in great measure to furnish the army with modern equipment that the first of the crash programs, the five-years plans, went into effect. At enormous sacrifice, the heavy industry programs were put into operation. Furthermore, the locations of the new industrial complexes were decided on a military rather than on a strictly practical basis, and, where possible, were in strategically safe areas—the Urals and Siberia. The placing of the great industrial centers out of reach of the enemy was to be of vital importance in World War II. The building of the Turkistan-Siberian Railway opened up a rich grain-producing area, thus helping to make Russia independent of the easily invaded Ukraine.

The new industries, inefficient as they were at first, succeeded in producing weapons of war far in excess of the estimates of most foreign experts. In 1928 the Soviet armored forces consisted of some thirty light tanks and a score of armored cars. At the outbreak of World War II, there were thirty-six armored or mechanized brigades. By the time of the German attack, this figure had risen to seventy-eight armored or mechanized brigades, and in the period of June 1941 to November 1942, although 1300 factories were dismantled and moved from threatened areas and there were severe losses, these brigades totaled 186. This amazing rate of production was far more than Hitler had counted on, and was a deciding factor in the Russian victory.

The years between the wars not only saw the development of the Red Army into a modern mechanized force, but saw sweeping changes in the command and in the structure of the army. In 1934 the dual control of commander and commissar was ended – the latter being relegated to the role of political adviser. The strength of the army was increased, from 562,000 to 940,000, and in 1935 was raised again to 1,200,000. In 1936, with the troops of the Commissariat of the Interior (the NKVD) and frontier guards, the armies numbered 1,550,000. Military ranks were reintroduced and the rank of Marshal of the Soviet Union created.

A startling purge in the summer of 1937 robbed the army of most of its top-ranking officers, including three out of five marshals. The top echelons were almost swept clean—90 per cent of all generals and 80 per cent of the colonels being arrested and in many cases executed, an estimated 35,000 in all. The reason behind this massive and disastrous purge, the victims of which were vaguely charged with treason and

crimes against the state, was the growing strength of the army officer corps. Many of these were veterans of the Civil War and/or of the Imperial Army. These men owed little to Joseph Stalin. Many were opposed to the ruthless crushing of the peasantry, from whom the majority of the rank and file came, and who bitterly resented the government's oppression. The mass slaughter of the higher ranks was the move of a typical Oriental despot, executed on a scale which put to shame the efforts of Shah or Sultan. While it may have had the ultimate effect of strengthening Stalin's hold on the party and army, the immediate result was a great weakening of morale and efficiency -effects which were still felt in 1941. Particularly serious was the loss of Tukhachevsky, the pioneer in the field of airborne landings - a believer in overwhelming artillery preparation for attack - and in the use of tanks in masses. It was neglect of this last precept which caused such heavy losses of Soviet armor during the initial battles of the war, in which tanks were frittered away in driblets. Another ill effect was the reintroduction of the dual control system, the commissars being restored to their original

The first real test of the new Red Army came in 1939, in the war with Finland. The Finns proved tough customers and put up a surprising defense. Russian tactics proved inflexible, and artillery fire concentration poor. The forests made poor tank country, and the main Finnish defenses, the immensely strong Mannerheim Line, held out for many weeks. There was a marked lack of initiative and coordination in the Russian attacks—reminiscent of Czarist days. This was probably due, at least in part, to the strain of serving an absolute ruler, cold and ruthless, and at the same time, sharing command with a political functionary whose reports might have dire consequences. Scarcely the atmosphere to encourage resourcefulness and initiative.

After suffering heavy losses and humiliating defeats, the Soviets regrouped and attacked again. This time they profited by their mistakes (a characteristic of the Red Army). With masses of men and material at their disposal there could be no question of the final outcome, and the Finns were forced to make peace. While the initial Russian defeats caused much unfavorable comment abroad, observers also noted of the Soviet soldier, to quote *The Red Army:* "His incredibly tough conduct in defense, his imperviousness to fear and despair, and his almost unlimited capacity to suffer."

The German Invasion

Before the invasion of 1941, the German High Command had been at some pains to evaluate the value of the Russian military machine. They recognized both Russian morale and discipline, and the value of their political indoctrination. (Hitler did not, and counted on their collapse after the first German victories.) The OKW had also a fair estimate (16,000,ooo) of the number of men capable of bearing arms, but they badly underrated the material strength of the Soviet armies, and especially the industrial capacity of the country. The enormous Russian losses in tanks, for example, were speedily made good and the powerful T-34 was turned out in great quantity, replacing obsolete models. This tank, one of the best of the war, was well armed - with a 76-mm, and later, an 85-mm long-barreled gun. Speed and maneuverability were good, and the 45-mm armor was proof against much of the German anti-tank weaponry. It was the workhorse of the Soviet armored forces, and its appearance on the battlefield was an unpleasant surprise to the Germans. Annual Soviet production of tanks, assault guns, and armored cars for the last three years of war reached 30,000, topping peak German production by over one-third.

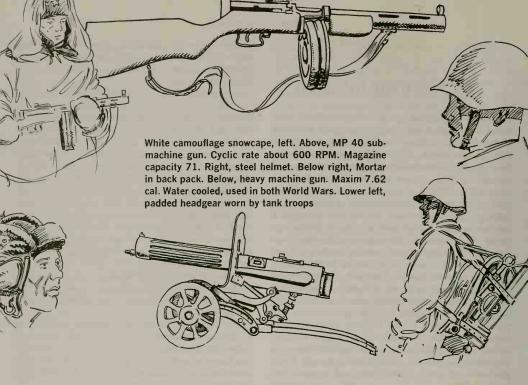
The total war effort of the country was gigantic. At the outbreak of the war, the Soviets had 108 rifle and 30 cavalry divisions, and 36 armored or mechanized brigades. In 1943, there were 513 rifle brigades or divisions, 290 armored or mechanized brigades and 41 cavalry divisions. The total of Soviet armed forces at that time was close to 13,000,000. The Soviet artillery was extremely powerful - some 19,000 guns in 1943 - many grouped in artillery divisions. The infantryman was well equipped - with numerous machine guns, submachine guns, and mortars. Besides regular artillery, the Red Army made great use of rockets. The Red Air Force, while never the strength of the Royal Air Force or the United States Army Air Force, was greatly expanded. Like the Luftwaffe, it was in the main a tactical arm, with emphasis on ground support. The heavily armed and armored Stormovik won considerable reputation as a "tank buster."

Despite the use of great numbers of tanks and thousands of guns, the basic Soviet assault weapon was the rifle division. It was Ivan, with his rifle or submachine gun, who took and held the ground, advanced across the minefields (time might be short and mine detectors few—but there were plenty of Ivans) or rode into battle elinging to the top of a T-34 tank.

Surprisingly - after the pitiful failure of the Polish eavalry to halt the German invaders in 1939-the Russians not only clung to their cavalry divisions, but expanded them. Metalled roads are scarce in Russia, and the fall rains and the spring thaw turns the ground into a bog almost impassable to a motorized transport. The cavalry, therefore, could often go when "General Mud" had stalled everything else. However, a cavalry regiment was not merely a mass of sword-waving horsemen. The composition varied, but always included many machine guns and submachine guns, 82-mm mortars, a battery of field guns and one of anti-tank guns, and AA units, as well as troops of auxiliaries. The cavalry division was made up of three or four regiments, plus at least one battalion of tanks and a squadron of armored ears, an artillery regiment and an AA battery, plus auxiliaries. It was therefore a powerful, self-contained, highly mobile unit.

The Soviet soldier in June of 1941, while doing more than his duty in most cases, was still not imbued with a fierce nationalistic spirit. The regime had laid too heavy a hand on the people for that. In many instances, the invaders were welcomed as liberators, and until the Germans in charge of the vast conquered areas began behaving like Germans, were probably content with their new masters. But the treatment accorded both captive civilians and troops soon made them see their mistakes. Preferring the hardships of Stalin's rule to the horror of Hitler's, they united and fought as never before.

The same held true of the partisans. The gross political errors made by the Germans had as much or more to do with the beginning of organized partisan warfare as any Soviet appeals to the patriotism of the conquered peoples. It was not until the barbarous behavior of the conquerors made existence intolerable that whole communities took to the forests and began a guerrilla warfare which did the Germans considerable damage. How great this damage actually was has been debated, but documentary evidence shows that, in the fall of 1943, out of 257 Axis divisions on the Eastern front, 25 were engaged against the partisans. Great numbers of railway cars, up to 200 engines a month, and miles of track were destroyed. Coupled with this, the incessant killings and acts of sabotage and arson put a constant strain, with consequent lowering of morale, on the forces of occupation.



And so, in World War II, the "Russian Steamroller," which the Allies of World War I fervently hoped would flatten the German war machine, finally got rolling. There was the same reckless squandering of human life, but this time with a difference. The Russian soldier, for a change, had the advantage of overwhelming amounts of equipment—and equipment equal or better than anything the enemy had. The result was disastrous for Germany and, in the long run, for the free world. For if any people have learned the lessons of Karl von Clausewitz, the Russians have. For them there is no peace—only war and threats of war under another name. They, more than any others, have learned the use of power—power fully coordinated and directed.

Today's Soldier

Which brings us to the Soviet soldier of today—a matter of vital interest to the West. In my estimation he is a better fighter, and belongs to a far more

efficient organization than the men who smashed the splendid German armies back from Russian soil, and ultimately fought their way through the Brandenburg Gate. For one thing, the easing of the economic situation has done away with much of the bitterness of the peasant soldier of the Stalinist days. Life in the U.S.S.R. may be grim by our standards, and probably will be for some time to come, but the harshness and cruelty of the earlier revolutionary days has been softened. The Soviet citizen today is, with few exceptions, exceedingly proud of his country and its accomplishments. Those in the West (and in this country in particular) who fancy that the average Russian is only awaiting a chance to rise up and throw off the yoke of his oppressors are merely deluding themselves.

The modern Russian armies are, as far as Westerners can judge, superbly equipped. The proportion of armored and mechanized divisions to rifle divisions is very high. In addition, each rifle division has some seventy medium tanks and armored selfpropelled guns. The shortage of motorized transport, which greatly hampered movement in World War II, no longer exists and corresponding strides have been made in communication, another branch which was weak in 1941.

Besides a huge army, Russia possesses in the Red Fleet a navy now second only to that of the United States. Recent estimates place it at 22 ernisers, 165 destroyers, and 465 submarines, of which perhaps 25 or 30 may be armed with missiles and 18 nuclear powered; frigates and escorts may number 275, with hundreds of minesweepers, torpedo boats, landing eraft, and auxiliaries. Most important is the lead taken by Soviet scientists in oceanography, a vital study badly neglected until recently by the United States.

Western knowledge of Soviet equipment is probably extensive. It is also, understandably enough, classified. It is unfortunate that there are many in this country who consider the belittling of an opponent as some form of patriotism. It would be a grave mistake to underestimate Soviet achievements in any form of weaponry, including atomics. As a general rule, industrialized nations keep roughly abreast of each other in the development of military hardware, and it is safe (and certainly sensible) to assume that the Soviet Union can at least match any equipment that the NATO forces possess.

As for Ivan, the Soviet soldier is today once more subjected to a severe discipline, and he and his officers are again separated by the barriers of rank. Even the gold and silver epaulets of Czarist days have reappeared (Shades of Order No. 1!). Much formality and punctillio has been reintroduced, and the salute, once damned as a symbol of servility, is now insisted on. In fact, the Soviet officer corps has already acquired the status of a superior caste. Pay is high compared to civilian standards, and privileges are many, including priority in housing and superior, and cheaper, purchasing facilities. Regimental life is stressed, with accent on manners and polish - which graces are also expected of the officer's wife. Advocates of greater democratization in the armies of the West would find few supporters among the new officer corps of the U.S.S.R. As representatives of the largest army in the world, with the greatest battle experience, it is to be presumed that they know what they are doing.

The Soviet service man is much respected in Russia, and the enlisted man, whose service usually begins at nineteen, while poorly paid, is better off materially than he would be in civilian life. His training is rigorous and his life singularly lacking in the little comforts and luxuries which his American counterpart has come to expect. Drill, training, lectures (both military and political), and sports fill his day and leave little time for leisure. Maneuvers are frequent

and realistic. When his time is up, he must serve in the first class reserve until he is thirty-five — during which time he puts in six two-month training periods. From thirty-five to forty-five — Class Two reserve — training is for five one-month periods, and from forty-five to fifty, the training is for one month.

Most military observers agree that the one weak point in the Soviet Army is the tendency, mentioned before, to adhere rigidly to orders, regardless of changed circumstances. This undoubtedly stems from the basic tennant of communist philosophy—the complete subjection of the individual and the habit of absolute obedience to higher authority. The pains and penalties in which error can involve the transgressor in a dictatorship such as the Soviet Union are sufficient to stifle initiative in all but the boldest. This applies as much to the NCO as it does to the general of a division, and if, as is likely, it is inherent in the Communist setup, it must pose a grave problem to the Soviet high command.

To offset this failing, the Soviet Army is very large – exceedingly well trained, disciplined, and equipped; made up of tough soldiers, with a reputation for a fatalistic disregard for hardship, danger, wounds, or death. Pride of service and unit have been bolstered by an intensive and clever propaganda (including the shameless rewriting of history) so that the Russian soldier believes himself to be superior to any fighting man on earth.

The average Soviet soldier has, by our standards, a savage, eruel streak in his makeup, a characteristic which applies as equally to the heads of state as it does to the private in the ranks. It explains much which frequently shocks us in Russian affairs and in our dealings with the Soviet-their ruthlessness and disregard for life and suffering, and the complete amorality of their behavior. This streak is latent in all of us, and we differ only in the degree of civilization - the thickness of the veneer - which overlays the savage. This "skin" takes a considerable time to form, and the Russian has been growing his for a shorter time than has the Western European. "Scratch a Russian," goes the saying, "and you will find a Tartar." This savage streak, distressing as it may be to our Western sensibilities, enhances rather than detracts from the Soviet soldier's fighting ability. A certain bloody-mindedness is necessary to any soldier, and militarily speaking, a well-trained, disciplined, and intelligent barbarian makes more satisfactory fighting material than his more civilized counterpart.

The Cossacks

No sketch of the Russian soldier is complete without the Cossacks, those glamorous and romantic riders of the steppes, whose exploits have fired the imagination of so many Russian youngsters. The original Cossacks (the word is of Tartar origin and means "free men" or "nomads") were serfs and outlaws who fled the tyranny of Polish and Russian masters and found freedom in the steppes. In the wild and unsettled regions of the Dnieper and the Don, these fugitives from civilization formed into bands for protection against the roving Tartars. They lived by hunting, fishing, and brigandage. Their organizations were little military republics, free and equal in peacetime, but under strict military discipline in time of war. Each community elected its leader or ataman. Among such a wild and reckless crew, the office, in peacetime, might be a dangerous one, but in battle the elected leader was obeyed without question.

One of the most famous bands was that of the Zaporzhye (Beyond-the-rapids) Cossacks, whose great



fortified camp, to which no women were admitted, lay in the lower reaches of the river. These Cossack communities waged almost incessant warfare with the Tartars and the Turks, war against such enemies of the Church being regarded as a sacred duty.

As the Cossacks grew in numbers and power, they were enlisted by the Poles to guard the frontier, regiments being formed and their leaders approved by the king. As might be expected, there was constant trouble between Cossack and Pole; between runaway serfs and fugitives from justice (mostly Orthodox) on one hand, and a government run by petty nobility and landowners (stanchly Catholic) on the other. The shortsighted policy of the Poles finally drove the Cossacks to rebellion. This was bloodily put down; but under Bogdan Hmelnitski (elected over-all leader, or "hetman," of the Ukraine), the Cossacks, now allied to the Tartar Khan of the Crimea, seriously threatened the Polish state. Battles, treaties, and more battles followed, until finally Hmelnitski transferred the allegiance of the Ukrainian Cossacks to the Czar.

Both the Cossacks of the Dnieper and their brothers of the Don found it difficult to live in peace with an authoritarian state. The steady encroachment of the Czars upon their lands and liberties caused endless trouble. Rebellion among the Cossacks almost inevitably involved a rising of the serfs, with its attendant bloodshed and reprisals. One such rising, under the Don Cossack Stenka Razin, took on the aspect of a national revolution, and was only put down with great difficulty (1671). The Don Cossacks revolted again in 1706, while the Ukrainian Cossacks, under their hetman, Ivan Stepanovich Mazepa (famous in Lord Byron's poem for his involuntary "ride," bound naked to the back of his horse), rose in rebellion in 1709. This ended once and for all the independence of the Ukraine. The privileges of the Cossacks were withdrawn, and the land was opened to others than Cossack owners. The same fate gradually overtook the other "brotherhoods" and the wild and free days were at an end.

The Cossacks in the late eighteenth and nineteenth centuries were organized in military districts, and settlements were made in various parts of the frontier—somewhat reminiscent of the soldier colonies of ancient Rome. In the days prior to the revolution, these districts, or voiskos, were ten in number; Don, Kuban, Terek, Astrakhan, Ural, Orenburg, Siberian, Semiryechensk, Amur, and Usuri. The villages or stanitsas, each under its elected ataman, held their land as a commune, the income from rent, mining, timber, or fishing rights, etc. going into a common fund. The land at the disposal of these Cossack communities



Cossack musician about 1900. Cossacks marched singing, accompanied by cymbals, bells and tambourines

was considerable—at the turn of the century it amounted to some 150,000,000 acres of land, or about 75 acres per head. Besides grants of land, there were also subsidies of money from the Russian government.

In return all males served an obligatory twenty years of military service, beginning at eighteen. Three years was in a preliminary training division, twelve on active service (of which one-third were on permanent duty and two-thirds on their farms, but on instant call) and five years in the reserve. Each man supplied his own uniform, equipment, and horse (if mounted). Arms were issued by the government. In wartime, the ten districts were to supply 890 sotnias (squadrons) of mounted men, 185 of infantry and 236 guns or over 180,000 officers and men. The peacetime establishment was some 63,000 men with 20 batteries. In 1914, there were mounted machine-gun detachments with each regiment.

Discipline was strict but there was a freer and more democratic relationship between officers and men than among the regular troops. Being a professional military caste, and, in relation to the peasantry, comparatively well off (they were assigned their tract of land at seventeen), the Cossacks held themselves superior to the workers and peasants, and even the troops of the regular army. This, coupled with the privileges accorded them by the government, and their native conservatism, made them stanch supports of the Czarist regime. They were used to reinforce the police in maintaining order, and, up to October 1917, could be relied on to charge the crowds on command, laying about them with nagaika (Cossack whip) or sabre.

They had a considerable popular renown, and were undoubtedly fine light horsemen, but military opinion as to their efficiency was divided. The Japanese went to considerable trouble to evaluate the worth of any possible enemies, and in the opinion of a Japanese staff officer, the Cossack of the time of the Russo-Japanese War had lost most of his plainsman's instincts except his horsemanship and was nothing but a yokel, poorly disciplined and badly officered, and living on the Napoleonic legend. Certainly the Cossack troops of that war did little to enhance their reputation.

It was natural that a majority of the Cossacks should support the counterrevolutionary armies. Thousands died in the Civil War, and afterward thousands more went into exile. Those who remained suffered severely. Their lands were, in many cases, "collectivized" or expropriated and they were excluded from their old profession of arms (until 1936 only members of the proletariat could serve in the Red Army).

But the Red Army needed cavalry—men who could both ride and breed and care for horses. So gradually the Cossacks were taken back into the fold. The military customs of service were revived and Cossack divisions reappeared in the Red Army—even the colorful old uniforms, despised for many years, were seen once more.

During the purge, the newly formed Cossack divisions were disbanded, but were reactivated before the German invasion. Their colorful past and great fighting tradition make them a useful adjunct to an army which is increasingly conscious of its military history.



THE FRENCH

THE FRENCH," so goes a song popular with the first Americans to fight in Europe, "they are a funny race"—and indeed the history of the French for the last 150 years has shown a strange mixture of hard-headed realism, military adventurism, fervent embracing of monarchy, followed by equally fervent upsurges of republicanism, great acts of patriotism, and periods of apathy. But underneath even the most revolutionary exterior, there has always glowed a strong sense of nationalism and a yearning after La Gloire. As changeable as the mood of the nation is the spirit of the French soldier—quick to swing from exaltation to despair, from momentary panic to the greatest heights of courage and devotion.

A soldierly spirit does not admit defeat easily, and when disaster is obvious, and the arms of France are being borne back, individual pride, coupled with a temperament somewhat mercurial and suspicious by nature, demands the blame be put elsewhere, and the cry "Nous sommes trahis" is heard. This cry of

"betrayal!" is usually the preliminary to—and the excuse for—a hasty retreat. On the other hand, the French soldier has proved on innumerable occasions that he can conduct a fighting retreat as well as a dashing advance, while the prolonged struggle at Verdun with the great rallying cry "They shall not pass," won the poilu an enviable place in history.

Too often, French courage has been hampered by poor leadership. Not leadership on the regimental level, for French officers have acquired, and maintained, a splendid reputation. But French generalship and staff work has seldom risen above the mediocre, and in many instances, has pointed the way to disaster. Every French military leader has labored under the shadow of Napoleon (in itself a mental hazard of no small proportion) and, unfortunately for France—though not necessarily for the rest of Europe—the aspirations of a martial race have not been fulfilled by a figure of comparable stature. But while the little Corsican rests, unsurpassed and unequaled, in his

tomb, the taste for glory with which he whetted the Gallic appetite lingers on.

The early days of the Restoration betrayed little of this hunger. The nation was, for the moment, sated with war—and one clause of the charter of the restored monarchy renounced conscription. Not for long, however, for so little did the people relish military service, that out of a nation of 36,000,000, not enough volunteers could be found to fill the ranks of the small army of 150,000. In 1818, conscription was reintroduced, but the annual contingent was only 40,000, who were to serve for six years. These numbers were gradually increased but only a part actually served with the colors, the others being sent home on leave. There were also exemptions for various causes and substitutes were allowed.

The Second Empire

The Bourbon rule ended quietly in the July revolution of 1830, but on June 14 of that year an event took place which was to have a great effect on the history of the French Army and people for many decades. This was the landing of French troops in Algeria. Just as the sub-continent of India provided a training ground for many of England's finest soldiers—so did the conquest of her North African Empire give France some of her most noted warriors. For many years the sands and mountains of Africa were to beckon the adventurous. Here were glamour and glory, victory, and (but in the distant future) defeat, one which would shake the army to its foundations.

But for the future of the French Army and Empire, the parched and weary soldiers of Louis Philippe in their long overcoats and tall shakos, cared little. They had their hands full, first to maintain themselves in a few coastal towns under the newly readopted tricolor, and then in the gradual and bloody expansion into the hinterland. The long seesaw struggle with the able native leader and patriot Abd-el-Kader gave rise to many fine feats of arms, and the taking of the well-fortified town of Constantine (1837) and the battle of Isly (1844) where 8000 French under Marshal Thomas Bugeaud de la Piconnerie routed 45,000 Moors, are proud events in the history of the French Army.

Meanwhile in France the misery and destruction of the wars of the Revolution and the Empire had been forgotten. A Napoleonic cult had arisen, thriving in the bourgeois dullness of the monarchy, and spurred



Officer of Chasseurs, 1829

by painters and poets, and by many old soldiers of the Empire now cooling their heels (but not, evidently, their blood) in semi-oblivion. Bonapartism - which conveniently forgot the absolute and arbitrary dictatorship of the Empire - concentrated on the past glories and on the (entirely imaginary) liberalism and equality of the brotherhood of Europe, which the Emperor had narrowly escaped forcing on the Continent at the bayonet point. This myth started on St. Helena and it has been rightly said that Napoleon was the first of the Bonapartists and a pretender to his own throne. Like most cults, it demanded and produced a martyr (a more unlikely contender for the crown of thorns can hardly be imagined). Strangely enough, the unimaginative Louis Philippe furthered the cause (thereby contributing to his own downfall) by bringing the Imperial ashes home to France, to a state burial in the Invalides.

When, therefore, the monarchy was overthrown in 1848—that turbulent year which saw the standard of revolution prematurely raised in many capitals of Europe—it was no great surprise to see Prince Louis Napoleon, nephew of the Emperor (the Duke of



Infantrymen, 1840

Reichstadt had died in 1832) elected as the first President of the new republic. It should have been no great surprise when, three years later, on the anniversary of Austerlitz, the Prince-president overthrew the existing government in a coup d'etat, followed in 1851 by his receiving full power as Napoleon III. In this he had the full support of a vast majority of the army, with whom he had been at some pains to identify himself. The older generals were all for parliament and the republic, but, as president, the Emperor had gathered around himself up-and-coming younger men, many of whom had won their reputations in North Africa. Saint-Arnaud, Canrobert, Pelissier, Vinoy, Bourbaki, Bazaine, these names first came into prominence under Napoleon III. They were to lead the armies of the Empire in Italy and the Crimea - some of them would see the shattering of these armies on the borders of France itself.

With the creation of the second Empire, the army came once more into its full glory. The drab trappings of the old regime were replaced by sartorial splendors equalling those of 1805. The courtyards of the Tuilerics once more rang to the tread of the Imperial Guard, the cavalry were resplendent in cuirass and dolman; helmet, busby, shako, and schapska. The wasp-waist was in fashion, and the Imperial mustache

and beard was as much the rule as red pantaloons and the rakish képi.

Uniforms strange to the old Empire were also to be seen, barbaric affairs of North African origin. Among them were those of the Zouaves, originally recruited from a Berber tribe of that name. When native regiments, the Turcos, were raised, the Zouaves became wholly European, but the baggy pants, ornate jackets and tasseled fezzes were retained. Their lightinfantry-type drill, snap and dash won them worldwide fame, and a rash of Zouave regiments appeared on both sides of the Mason-Dixon line during the American Civil War.

Armament was not allowed to lag behind military haute couture. The Emperor, once an artilleryman (he had also, in his London days, tramped a beat as an auxiliary policeman) was the author of a Manuel d' Artillerie. He was also of an inventive turn of mind, and tens of thousands of embattled Americans, Yankee and Rebel (many of whom had never heard of Napoleon, the Emperor) would appreciate his contribution to the gun-maker's art, as they served their efficient 12-pdr. field pieces. Nor had small arms been neglected. The wild shooting of the smoothbore musket had long spurred attempts to design a rifle which could be loaded with ease, and whose ball would still take the grooves sufficiently to impart the required "spin." In 1826, Captain Delvigne of the French Army invented a chamber with a shoulder, on which the loose-fitting ball could be expanded enough to take the rifling. This involved considerable hammering with the ramrod, which distorted the ball and prevented accuracy. An improvement, by Captain Thouvenin, also of the French service, substituted an iron stem, or pillar, projecting into the breech, on which the ball was driven. This also suffered from distortion, but one great improvement had been made: The missile, instead of being round, was now conical in shape, giving far greater accuracy. The next step was the invention, by yet another French captain, of the famous bullet which bears his name. This Minié bullet had a tapered hollow in the base, in which was fitted an iron cup. The force of the explosion forced the cup into the hollow, spreading the missile into the grooves. The improvement in accuracy over all previous rifles was so marked that the idea was widely adopted-the British government paying Captain Claude Minié £20,000 for the adoption of his bullet.

French naval power was brought into line with military expansion, and when her troops embarked for the Crimea, France was again a first-class power. That bloody and far-distant campaign, in which the French soldier repeatedly showed his accustomed dash, produced another example of French ingenuity (the inventive Emperor once more) - the first ironclads. True, the armored floating batteries were not warships in the accepted sense (neither were the Monitor and the Merrimac), but when the Lave, Tonnante, and Dévastation steamed slowly in toward the Russian forts at Kinburn on the morning of October 16, 1855, a new era of naval warfare began. At a range so close that a wooden ship would have suffered terribly, the ironclads methodically pounded the Russian works to pieces, while shot and shell rattled off their four-inch sides and plated decks. When the battered forts surrendered, the ironclads had been struck some two hundred times. Their losses: two killed and twenty-five wounded.

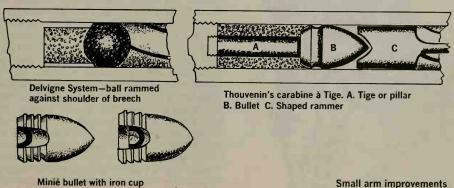
The French in the Crimea fought under more difficulties than mud, cold, cholera, and Russians. For the Emperor, besides being a dabbler in naval architecture and artillery, was an amateur general, and while his ideas in weaponry bore some fruit, his ventures in the field of generalship were not of the happiest. Many leaders and statesmen (Lincoln and Churchill among them) have felt the urge to command - and while sometimes a flash of intuition lights a path which professional military men might shun or overlook, in the long run the tendency to meddle is usually disastrous.

Unfortunately, the comparatively recent invention of the telegraph had linked the Emperor with his generals - a long-distance control which drove General François Canrobert to resign, and General Aimable Pelissier to distraction. (They were spared, however, a visitation in the flesh - the likely prospects of which alarmed both French and British commanders more than Russian victory.)

The next campaign, in northern Italy, saw the Emperor take the field in person. The eighty-year-old Baron Henri Jomini, who had served with Ney at Ulm and Jena, drew up a plan for his master's nephew. To quote Philip Guedalla's The Second Empire: "It ignored completely the unauthorized innovation of railways, and it depended for its success upon the obliging courtesy of an enemy who would keep reasonably still. But since it was for use against the Austrians, it was entirely successful, and the French enjoyed in 1859 the pleasing experience of defeating with the methods of 1809, an adversary whose military thought was that of 1759. . . . but if the Austrians had been Prussians . . . the French would have been swept against the Alps."

But if the generalship was questionable, the conduct of the army was not, and the victories of Montebello, Magenta, and Solferino raised France to the position of the leading military power - while Europe watched nervously to see what the ruler with the fearsome name would do next. The watching was not confined to Europe; and Washington, embroiled in a civil war, could only look with a jaundiced eye on the spectacle of French troops marching into "liberated" Mexico City. The Mexican adventure did not intrigue the Emperor for long, but before the last French columns disappeared down the road to Vera Cruz (leaving the unfortunate Maximilian to face his firing squad) some new honors had been added to the French arms.

But the great contest lay ahead. It was with mixed feelings that the French saw their old Austrian enemies smashed by Prussia, and the new German confederation under Bismarck's leadership offered a definite threat to French interests. It was also obvious that the French Army, with its limited form of con-



scription and lack of trained reserves, would have difficulty meeting the "nation in arms" concept of the Prussian military machine. In 1867, therefore, a scheme for an army based on universal service was brought forward, but before it could become effective, Bismarck had found his excuse for war and the Germans were on the frontier.

The French Army of 1870 was full of fight. If anything, it, and its leaders, suffered from overconfidence borne of years of victory. That the bayonets, which had conquered an Empire in Africa, had stormed the Malakoff in the Crimea and La Puebla in Mexico, and set the white-coats reeling back from Magenta and Solferino, should go down to smashing defeat was inconceivable. But there was more to war, even in 1870, than the glitter of steel and the blare of bugles. Panache could not make up for lack of staff work, and there was nothing obliging about the German High Command. Almost without exception, the great names of the Empire were linked with disaster; Mac-Mahon, the victor of Magenta; Bazaine; Canrobert; Bourbaki. Brilliantly as the French might fight in isolated actions, their every effort to correlate the movements of large bodies of troops and supplies failed miserably.



Staff errors on the German side and the chances of war gave opportunities for victory, opportunities which the Emperor and Marshals of the First Empire would have seized unhesitatingly. But the Marshals of the doomed Empire of Louis Napoleon staggered groggily from one defeat to another, until the crowning blow fell at Sedan, and on September 1, 1870, a sick and weary Emperor drove out to surrender himself and his throne. Five weeks of military blunders saw much of the splendid long-service army of veterans casualties or in prison camps, and laid the country at the feet of the invaders—or so it seemed.

But France was not finished yet. Despite losses in killed and captured, the regular army still contained over half a million men (mostly recruits and reservists) while the navy, marines, and special forces added another 50,000. The Garde Mobile, formed in 1868, doubled these figures, and the Garde Nationale, not called into being until September 15, 1870, added over 500,000 more. The effort put out by the nation in the hour of disaster was very great. Only partially trained, and poorly armed and equipped, nevertheless the hastily raised levies of a people in arms kept the German armies engaged until the end of January 1871. Had generals like Antoine Chanzy and Louis Faidherbe been in full control, the war might have come to a different conclusion. As it was, the French soldier, indeed the whole nation, came out of the war with credit.

Much has been written of the franc-tireurs (freeshooters). These groups of irregulars were originally rifle clubs and unofficial military organizations formed in the late '60s. Unfortunately for them, they had always resisted attempts of the French military to bring them under army control, not coming under such orders until November 1870. Being without uniforms, the Germans treated them as armed noncombatants, and usually shot them out of hand. While these bands did little real military damage, they forced the enemy to disperse large forces to guard railways, bridges, etc. and by constant sniping and cutting off of stragglers, couriers, foragers, and patrols, they frequently seriously hampered German reconnaissance and troop movements. It has been suggested that the relatively high ratio of deaths to wounded in the French forces (German: 28,000 killed, 101,000 wounded; French: 139,000 killed, 143,000 wounded) can be attributed, in part, to the German shooting of franc-tireurs and hostages, taken from villages and towns where resistance was shown.

The quarter-century which followed the Franco-"German War saw the French Army reach a high peak of popularity. *Revanche*—the winning back of the lost provinces of Alsace and Lorraine - and the wiping out of the stain of defeat was uppermost in every French heart. The many crises and obvious weaknesses of the Republic turned the French people to the army as the one stable and honorable national institution. One feature of this rebirth was the adoption of compulsory service. The term of service was gradually reduced (from five years to two) but the system, with the first years spent with the colors, then in the reserve, and finally in the territorial army, remained the same. During that same period the army attracted, because of the prestige and glamour, the best class of officer material. A General Staff was created and a Staff School set up. An intellectual revival reversed the trend of the Second Empire years -when a Marshal of France could declare, "I eliminate from the list of promotions any officer whose name I have read on the cover of a book."

The equipment and weaponry of the army was overhauled and brought up to date. The Lebel magazine rifle was introduced into the service in 1886, and in 1897, the famous 75-mm quick-firing field gun was developed. This piece was to see much service in the First World War, and was still the standard light field piece in the Battle of France in 1940. On its appearance, every major power set about developing comparable weapons—the Germans, a 77-mm; the British, a 3.3 inch 18-pdr; the U.S., a three inch; but for performance and simplicity of action the Soixantequinze was unique.

The French soldier had his share of colonial warfare during this period. There was always fighting down on the edge of the Sahara, with the képis often in square-Lebels blasting volleys into galloping masses of desert horsemen - or grimly holding some little mud fort, à la Beau Geste, while relief columns plodded through the shifting sands to their relief. Tunisia became a protectorate in the early '8os. At the same time, other Frenchmen were hacking their way through the jungles of Indochina, battling tropical disease and the Chinese Black Flags. As was usual in all colonial wars, disease killed more than the natives; but there was hard fighting, as at the taking of Son-tai (1883), a strongly fortified town on the Red River some forty miles from Hanoi. It is an interesting commentary on the advantages of discipline that a strong position, garrisoned by 20,000 Chinese and 5000 Annamese could be taken by a mixed force of Turcoes, French, and native auxiliaries, numhering some 6000 in all. True, the French were assisted by gunboats and light artillery, whose shells did considerable execution, while the cannon of the defenders were mostly old muzzle-loaders. On the other

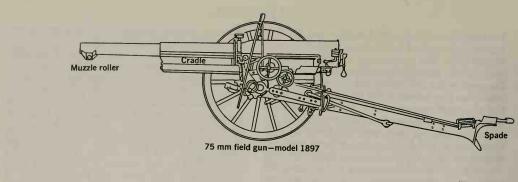
hand, the Chinese regulars were fairly well armed, many of them with repeating rifles.

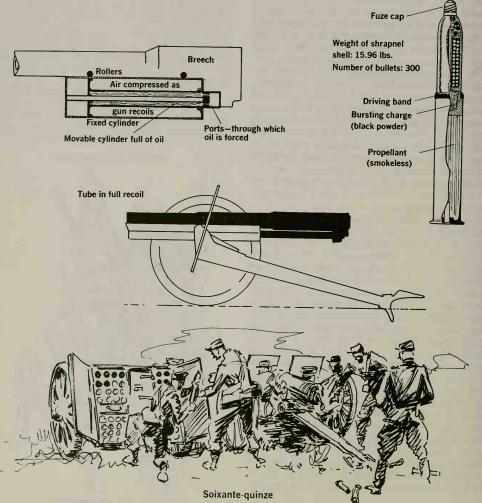
Seventy years later, despite the use of automatic weapons, mortars, barbed wire, "alligators," airplanes, napalm bombs, and all the equipment of a modern army, the French were finally driven from Indochina. In the three-day action at Son-Tai, French losses were 92 killed and 318 wounded. In the savage fighting of the recent war such losses were frequently incurred in one night in holding positions, heavily mined and wired, against Vict Minh attacks. The use by the enemy (who in the heyday of imperialism were mostly armed with spears and muzzle-loaders) of mortars and artillery is one of the reasons why "civilized" troops have such difficulty in maintaining themselves in so-called "colonial" warfare. The other, and paramount, one is the fact that nearly all such warfare is now of the guerrilla type (of which more later), waged by nationals who can, at will, melt into the countryside.

Native mortar and machine gun squads, pressure mines and "Molotov cocktails" were far in the future when sun-helmeted Frenchmen took over their share of Equatorial Africa and Madagascar. But crude

Chasseur d'Afrique, 1885







leaden slugs, poisoned stakes, and yellow fever they knew, and carried the tri-color into the far places in spite of them.

The confidence of the French people in the leadership of their fine army was shaken in 1894 by the celebrated Dreyfus case. This sad affair had all the necessary properties of a badly written spy melodrama; the innocent hero, Captain Alfred Dreyfus (unfortunately lewish), wicked villains (unfortunately mostly in high positions), the false accusation, the "cooked" court-martial, the sword broken on parade, Devil's Island, retrials, rehabilitations, and recriminations. What it boiled down to was the refusal of the military clique - conservative, royalist, religious - to admit its fault and do justice to a wrongly convicted man. The attempts of the military to whitewash their own guilt (even including the forging of "evidence") and the ensuing scandal, which set half of France at each other's throats, did much to lower the prestige of the higher command and the management of the army as a whole.

However, the misfortunes of the unhappy captain served to draw attention to the fact that the revered officer corps of the huge (500,000 in peacetime) army was scarcely representative of the republic as a whole. This, in an age of increasingly left-wing republicanism, caused considerable furor and led to much bitterness. In consequence of all this, the army came in for severe criticism, while at the same time, a new and busy generation, many with leftist (and therefore anti-militaristic) leanings, was thinking more of jobs and world trade than of bleeding Alsace and downtrodden Lorraine. The army of 1905 was in the doldrums, but it was to get a tremendous boost in morale from the teachings of a new school of young staff officers.

World War I

The great army which France had readied for the renewal of the conflict with Germany was intended originally for defense. With the disparity (growing every year) between the numbers which the rivals could put in the field, the French High Command had never dared contemplate anything else. In line with this, an extensive fortress system, based on Belfort, Verdun, Epinal, and Toul had been constructed. The system was not continuous, the plan being to fall upon the flanks of the German forces passing through the gaps.

But this defensive strategy was not to the liking of the new school. They had studied the commentaries on Napoleon and decided that the secret of his success was his emphasis on attack. They also knew that in most cases the men on the receiving end of a charge break before the actual moment of contact. They therefore evolved the theory that if the attack is carried out with sufficient élan, and in sufficient numbers, success was assured. French bayonets, French valor, and French dash would triumph over the German masses.

So the infantry tactics were revised, and attack! attack! always attack! became the watchword. "... the French army, reviving its old traditions, no longer admits for the conduct of operations any other law than that of the offensive," read the Provisional Instructions, 1912–1913.

Those who remembered the trench warfare around Port Arthur, or pointed to the deadliness of Mauser and Maxim in the South African War were marked for early oblivion (one of these cautious souls was named Henri Pétain). Field works and entrenchments were to be things of the past, while the machine gun was too heavy to be of use in the advance. Likewise, heavy and medium artillery were neglected as being too slow to keep pace with the attack. The charge was to be preceded by a drumfire of the mobile 75s, which were light enough to follow the on-rushing képis. But while French corps artillery had only 120 guns—all 75s—German corps had 160, some of which were 105-mm and 150-mm pieces.

The German Schlieffen Plan called for holding on the (German) left, and smashing around through Belgium and down the coast with a greatly reinforced right. The French, although admitting the pos-



sibility of a German advance through Belgium, believed that it could only be in small strength. They themselves would not dilute the fine fighting spirit of their regular divisions with those of the reserves. They therefore assumed (and wrongly) that the Germans would not do so either, and so would not have enough men for a smashing flanking sweep plus a strong defense of left and center.

Despite all the "talent" incorporated in the French General Staff, the jealousies and polities in which the French High Command had become involved almost brought the Republic to ruin. The vice-president of the Supreme War Council, the man who would normally be Commander-in-Chief in wartime, was General Michel. He had anticipated the German movements (no great plans of long standing can remain secret indefinitely) and correctly assumed that the Germans would mobilize and use their reserve troops with their active divisions. In fact, the French were in possession of German mobilization plans of October 1913 which revealed this. However, Michel's plans to counter the German moves ran contrary to

Infantryman and Dragoon, 1914



the accepted teaching of the General Staff. His removal was therefore arranged and, after more politicking, a man, Joseph Joffre, was chosen (presumably because he could be "manipulated") who had never commanded an army and who knew next to nothing about staff work. So determined was the Staff that their war plans should remain unchanged that a paper purporting to be a German concentration plan, showing that reservists would not be used in the line, and that their advance would be on the right bank of the Meuse, was forged, and "found" in a railway

So, forgetting Sir Hiram Maxim and his imitators, the French adopted the famous Plan 17, which called for all-out assaults against the enemy from the Ardennes almost to the Swiss border. The main thrust was to be into Lorraine. Here in the opening days of the war the French armies, totaling a third of the whole force, dashed themselves against the German artillery and machine guns. Young graduates of St. Cyr in their full dress uniforms, and the blue-coated poilus, their bright red breeches making a martial display (and a splendid target) attacked furiously only to be cut down in thousands. German losses were also heavy, but the persistence of the French-massed attacks against an enemy who made intelligent use of cover and fire-power caused shocking casualties.

To "Papa" Joffre's credit, the "always attack" orders were speedily modified, but the damage had been done. When the first shots were fired, the French field armies had totaled some 1,300,000 men. In the five weeks of frontier battles and the Marne, their losses amounted to around 600,000 men-almost half! An estimated two-thirds of all French infantry officers engaged were casualties. So much for à la baionette!

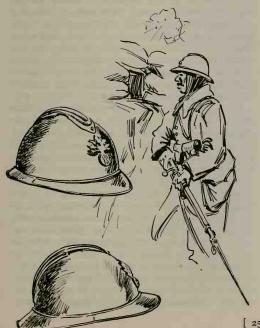
The French soldier settled down to trench warfare with good humor and proceeded to make himself as much at home as possible under surroundings that were often unbelievably ghastly. As time went on, trench systems became most elaborate, and by the standards of the winter of 1914 - when men stood for days in shoulder-high trenches, knee deep in mud, blood, and half-frozen slush - positively palatial. On the other hand, the amenities of the new form of trench life were somewhat marred by the introduction (or rather, reintroduction) of mortars, grenades, and grenade-throwers; and the use of flame throwers and poison gas.

However, wars are not won by sitting in trenches and much of la Belle France was in German hands. So began the constant nibbling and battering which was to cost France, from January 1915 to November

1918 more than 1,300,000 killed or captured, and over 2,500,000 wounded. It was a horrible price for ultimate victory, and to the man in the trenches it soon became apparent that the generals who controlled his destinies had very little idea of how successfully to go about breeching a trench system which ran in a solid deep line from the English Channel to the Swiss border. The best that these gold-laced ones could come up with was the elementary and brutal fact that if, after pounding the enemy's line (X number of shells to Y number of square yards) more men could be fed into the attack than the surviving enemy could kill with the local means at his disposal, then a limited objective could be reached, and perhaps even held against the inevitable counterattacks.

Attrition is an ugly word when applied to warfare, even when the wearing down is done by the stronger party. When, as in the case of the French and British on the Western Front, the enemy was stronger and likely to grow more so, attrition took on a desperate meaning indeed. Yet, as the second year of the war ended (French casualties during 1915 were over 1,375,000) neither the countless small actions nor the major offensives had gained more than a few square miles of churned up blood and mud.

Steel helmet-first issued in the autumn of 1915



By now the politicians, who heretofore had left the running of the war to the professionals, were becoming dismayed and disgusted at the eastly bungling. The holocaust at Verdun, where the Germans attacked a salient which they knew that the French, for reasons of prestige and national honor, could not afford to let go, had drawn in sixty-six French divisions; and in the four-month period, February to June 1916, had cost 442,000 casualtics. The leftwingers, Socialists, pacifists, trade-unionists, etc. had begun a stop-the-war campaign and the troops were being subjected to a barrage of subversive literature. The apparent futility of the struggle added weight to the propaganda of the far left (which could easily have been silenced by vigorous government action). The war-weary troops, who had lost much of their faith in both civilian and military leaders, were, however somewhat heartened by the preparation for a "different" kind of offensive, one which was to end the stalemate on the Western Front at one stroke.

The author of this was the dynamic General George Nivelle, whose lightning-like attacks in the last stages of the Verdun battle had won back much of the lost ground, and incidentally, won him Joffre's post as Commander-in-Chief. The great attack was to be made after mammoth artillery preparation, and was to emphasize speed of penetration and rapid "leapfrogging" of reserves into the line. Unfortunately with so vast an undertaking, involving hundreds of thousands of men, it was impossible to enforce secrecy, and the Germans knew of the offensive, and were preparing for it. As the time for the assault grew near, it had become obvious that the military situation had changed drastically. The outbreak of the Russian Revolution, the certainty of the United States' entry into the war, and Ludendorff's decision to straighten his line by abandoning the great German salient (thus throwing Allied preparations out of gear) had, or should have, meant revision or cancellation of the at-

But Nivelle insisted that his great "surprise" blow would smash the German lines with ease (the eight divisions facing him had now been increased to forty) and on April 16, 1917, the whistles blew and the waves of horizon blue went "over the top." Far from reaching the German reserve positions - in many cases torrents of machine-gun bullets prevented the troops from even leaving their own trenches. Those that did were held up by wire, uncut by the bombardment. According to plan, fresh battalions were being rushed every few minutes into the already jammed assault trenches. The rear was chaotic, as corps after corps pressed forward, causing fantastic confusion, while



Officer and enlisted man, 1916-18

German shells poured into the packed assault areas. In places gains were made, but there was no promised breakthrough, and while 21,000 prisoners were taken, and 183 guns, the initial offensive cost some 100,000 casualties. The obvious blundering of the generals, dissatisfaction with leave and hospital arrangements, exaggerated reports of casualties (actually, compared to some of Joffre's offensives it was not too costly) and disappointment, after so much had been hoped and promised, sent morale plummetting.

On April 29, 1917—a black day for the French Army—there began a series of mutinies, mostly isolated and some very short-lived, but which ultimately affected at least 54 divisions. News of the incidents was suppressed, and Pétain ("Lavish with steel, stingy with blood") took over from the unlucky Nivelle.

The troops were gradually recalled to their duty, though not without some fighting and many executions. The cavalry, not being involved in the slaughter in the trenches, remained steady and were used against the mutineers.

The good sense and patriotism of the average citizen-soldier gradually asserted itself. Two limited-objective attacks, made on narrow fronts after tremendous artillery preparation, won considerable gains with many prisoners at very small cost, and did much to restore morale. The soldiers, fighting in their own country, and, in many cases, near their own homes,

were particularly sensitive to the political situation; and when this too was finally resolved and a strong "win the war" government under the fierce old Georges Clemenceau was formed, the troubles were at an end.

But final victory and the reoccupation of the lost provinces could not erase the memory of 1,357,000 dead. The postwar years saw a tremendous upsurge of anti-militarism, and a corresponding lessening of money available for military purposes. Much of what was allocated was spent on fortifications, for during the four years of war on the Western Front no breach had ever been made in any line that could not be mended; and the General Staff was now wedded to the doctrine of continuous defense. The epitome of the fixed defense was the Maginot Line, created at vast expense.

The Maginot Line

Unfortunately the impenetrable Line, which was to guard France from any German thrust, was not a continuous defensive work but only two separate sections of 70 kilometers each. If to this is added 20 kilometers around Montmedy, fifteen around Maubeuge, and five around Valenciennes, the total of permanent fortifications was 180 kilometers out of a frontier of 760! Had time and money permitted, other sections would doubtless have been built; but the traditional invasion route into France is through Flanders, and it was the fixed policy of the General Staff that it was necessary to defend the northern frontier by advancing into Belgium.

The gaps were held by light fortifications, on the style of the last war - the theory being that to break through them would require such concentration of troops and artillery that the defense would always have time to concentrate in its turn, sufficient strength to contain and repulse the assault. In 1921, Pétain, as Commander-in-Chief, formulated the Provisional Instruction for the Tactical Employment of Large Units. This, despite the great changes taking place in modern arms and equipment, became standard military doctrine. With few exceptions (De Gaulle was one), French military thinking remained stubbornly behind the times. Tanks were to "assist the advance of the infantry." (Out of the 261 sections of the Instructions only three mentioned tanks!) The Air Force was to have a subsidiary role - spotting for artillery, reconnaissance, and night bombing attacks.

WESTERN FRONT-May 10, 1940

INFANTRY DIVISIONS (French Infantry Division equals 3 Infantry Regiments, each of 3 Battalions of 800 men)

ARMORED DIVISIONS

MOTORIZED DIVISIONS CAVALRY DIVISIONS GARRISON DIVISIONS PLANES

French - 70 Belgian - 22 British - 10

French - 54 Battalions (Approx. 3,000 tanks, plus British)

French - 3 French - 1 French - 13

French - Approx. 1,200

R.A.F. - 600

German - 118

German - 10 Divisions (Approx. 2,500 tanks)

German - 6 German - 5 German ----

German - Approx. 3,200

There might originally have been some excuse for such thinking, considering the materials of 1921. There was none later, after all the development and testing (Abyssinia and the Spanish Civil War) of modern planes and mechanized equipment.

But the French military hierarchy, which had misread the lessons of previous wars both in 1870 and 1914, proceeded to do so once more - thus laying the groundwork for a more shattering disaster than ever befell any major power. Truly has it been said that nothing is more dangerous to a nation than a previous victory.

As for the men-they were, as always, a crosssection of French civilian life and thought. Aggressive and anxious for a war, they certainly were not. They remembered the dreadful losses of the old war, and had seen little advantage accrue from the nation's sacrifices. There were no lost provinces to retake-no defeat to avenge. Communist and Socialist influences were strong in the cities. Furthermore, the "concrete shield" had lulled the country into a feeling of secu-

After the debacle the High Command claimed that the country's defeat was caused by moral degeneration - easy living, pleasure seeking, etc. There may have been some truth in this, and, for the reasons given above, the French soldier was not the eager, combative fighter of 1914. However, the real cause lay in faulty doctrine, outmoded plans of campaign, poor liaison and staff work, and total incomprehension of the art of modern war. Nor was the excuse of faulty equipment and the overwhelming numbers of the enemy valid, as the above figures show.

Of these planes, the Allies had about equal strength in fighters, but no dive bombers. In quality of tanks, the French tanks were on the whole more heavily armed and armored (the "B" tank was rated the best

in existence) but slower and of shorter range. British armor was about on a par with German.

Where the mistake was made was in frittering away the armor in little packets as infantry support instead of massing it for a decisive blow.

An organization, civil or military, is what its leaders make it. The tone, the morale, the efficiency comes in great part from the top. Any student of military history must be particularly aware of this. Time and time again, seemingly worthless material has been revitalized by dynamic leadership, by strong control and discipline. In almost all cases where troops have proved "rotten" in combat, the fault can be traced back through the NCOs, the officers, and finally to the commanders - and often the C.-in-C. himself. Napoleon once said that there were no bad regiments, only bad colonels. In other hands the same troops have showed themselves battleworthy, steady, and of good spirit. It was the tragedy of France that in the time of greatest need the honor of the French Army and the safety of the nation was in hands unworthy of upholding it.

The campaign in the West in 1940 was vast in extent - covering many miles of territory and including, for a short time, the troops of five nations. It involved hundreds of thousands of men and tens of thousands of vehicles and guns. Yet for a few brief hours, the spotlight was turned on one small area - a few miles of river front, held by one French corps, the Xth, and two of its divisions, the 71st and the 55th.

There were doubtless many such units in the French Army; reserve formations of mediocre quality, which should have been brought to a high state of efficiency during the long months of the "Phony War." But leadership was slack-discipline indifferenttraining neglected and, consequently, morale low. The front held by the 71st and 55th was easily de-



Infanterie des Régions Fortifiées, 1939

fensible ground, fronted by an unfordable river and guarded by trenches, wire, and, every 200 yards, concrete pillboxes containing anti-tank and machine guns. Yet when the German attack came, the preliminary bombing by the Stukas held the troops cowering in their trenches. Instead of manning antiaircraft weapons, they hid in their earthworks, demoralized by the howl of the diving planes and the roar of the bombs, which did comparatively little damage. The gunners of the divisional artillery were driven from their pieces by the uproar, while German tanks and anti-tank guns engaged and silenced the pillboxes. While the paralyzed troops clung to their shelters, the Germans launched their rubber assault craft, and even as clods of earth from the last bombs were still falling, they reached the south bank. The line of the Meuse was breached. "Their troops," said General Paul von Kleist, "as we repeatedly found, gave up the fight very soon after being subjected to air bombing or gunfire."

The men of the 55th and 71st Divisions were driven out of their prepared positions by infantry alone. The panic which followed the arrival on the south bank of the panzers may be well imagined. The psychological dislocation resulting from mechanized forces operating against the rear areas of an army organized for linear defense is always most serious, even against

the steadiest troops. Against inferior troops, already shaken by air bombardment, it can be disastrous. Despite fierce but uncoordinated resistance from better quality units in other sectors, in three days the Ninth Army had ceased to exist, and a fatal gap was opened through which the German armor and infantry poured in an ever-expanding stream.

Even then, firm direction from above and brilliant leadership in the field might have stemmed the German rush. The German tanks were vulnerable to the modern French anti-tank guns, and German infantry and supply following their armor were open to flank attacks. But directions from the top were not forthcoming. General Maurice Gamelin, in supreme command, insulated and isolated (there was no radio at HQ!) in his ivory bombproof at Vincennes, left the battle to General Alphonse Georges, newly created C.-in-C., northeast front. Having delegated this authority, Gamelin scarcely left his "submarine without a periscope" until the obvious physical collapse of Georges made some sort of interference necessary. However, that same evening - May 19 - Gamelin was relieved of command and replaced by Weygand. This changing of horses in the mid-stream of a great battle lost two more days. Every order which reached the combat units stressed the need to "maintain a front" - to "contain" the thrusting panzer columns. There was little indication that those in command realized the impossibility of carry out such tasks ("hopelessly outdated orders to generals who had lost their troops," as Colonel Adolphe Goutard wrote in his Battle of France).

With confusion reigning at the various HQs, it is no wonder that the commanders in the field were at a loss, or that their troops (who were quick to sense hesitation in their leaders) should lose confidence. With paralysis above and demoralization below, the weaker elements in the army speedily disintegrated. Those units capable of fighting were left "in the air" with no flanks of supports. Most of the best troops, No. I Army Group, were in Flanders, and, with the B.E.F., cut off when the German panzers reached the Channel on May 20.

When plans for pincer attacks were finally formulated, it was too late. The troops who should have made them were disorganized or dispersed and the opportunity for a "second Marne" was lost. In any event, the chances for the success of such operations were slim, owing to the tactical superiority of the German panzer units over the widely scattered French armored units, and the effect of air and armored attacks on the French infantry. (To do the latter justice, in many cases they recovered their nerve,

after the panic of the first few days, but the disorganization of the armies was too complete for their bravery to have any effect on the outcome.) How much the Germans were vulnerable to determined attacks by organized armored forces was shown by the attack on May 21 by a small British force of two tank regiments, a battalion of infantry, and a battery each of field artillery and anti-tank guns. These fell on Rommel's armored division and, as he wrote in his Papers: "The situation was critical. Our troops had been thrown into a terrible confusion. Carried away by retreating infantry, gun layers in one battery abandoned their guns. . . . the anti-tank guns which we hastily brought into action proved too light to pierce the heavily armored British tanks. These guns were knocked out by artillery and then overrun by tanks. A great number of vehicles were set on fire."

A sortie by some 140 tanks, many of them light, could not effect much, but it had surprising effect on the German High Command and was admitted by Field Marshal Karl von Rundstedt to have been the most serious threat of the battle. An attack by the under-strength French 4th Armored Division (De Gaulle) at Abbéville on the Somme also had considerable success and took five hundred prisoners. Small as these incidents were, they gave an indication of what might have been accomplished if the French command had not lost control, and was a heartening reminder that the Germans were not super-men.

The fighting retreat of the French First Army and the B.E.F. to Dunkirk is history. The shrunken perimeter was ultimately held by the French, the last British troops leaving June 2. A final effort removed 38,000 French on the night of the third, making a total of 110,000 French soldiers evacuated. The remainder, some 25,000, surrendered the next day.

Despite many acts of heroism and devotion to duty, after Dunkirk the Battle of France could only end in the destruction of the French forces or the withdrawal of a portion of them behind the barrier of the Mediterranean. In earlier days, armies might have rallied and regrouped, but this the speed of the new motorized warfare did not allow. Spirited resistance on the Somme and the Aisne checked, but could not hold, the German advance. The rapid thrusts of the German forces swept through or around all obstacles, and the 400,000 men of the Second, Third, Fifth, and Eighth armies were pinned against the Maginot Line and forced to surrender on June 22.

The fall of Reynaud's government and the coming to power of Pétain heralded the end of French resistance. Had Reynaud remained in office the fight might have been maintained from North Africa. The



Tirailleur Marocain, 1939

result of this stand would have completely altered the strategical picture in the Mediterranean (no struggle in the desert - no North African landings - probably an early victory over Italy, which would not have stood up under air assault - no Greece - no Crete). It would also have spared the French Army the agony of more than two years of divided allegiance, frustration, humiliation, and dissension. Although they received little sympathy - the men of the French Army, particularly of the officer corps, faced a troubled future. Many were torn between loyalty to their government and military chiefs, their admiration for the Free French, who had elected to fight on overseas, and for the growing Resistance groups in the occupied territory. Those who believed that the war was definitely lost in 1940 were distressed when Vichy troops clashed with their brothers in the Free French forces, as they did in numerous instances. Encounters with the British could be easily born (there was always latent Anglophobia among many in the French service, especially the navy); and the fact that Britain carried on the fight when the French had capitulated was a blow to their professional pride. The French Army was the finest in the world, they reasoned. It had been beaten-therefore the victorious Germans were rightly the rulers of Europe, and any attempt to dispute this was a reflection on the French generals and their leadership. (Much the same attitude is to be noted in French reaction to the current American effort in Vietnam.)

Yet, as the war raged on - as the Soviet Union and the United States became involved - as the bombers of the ever-growing R.A.F. rumbled nightly overhead -many came to have second, and disturbing, thoughts. It was comparatively easy at first to retire into a purely military-monastic frame of mind, to work to rebuild the shattered discipline and organization of the army, and scrupulously to obey the orders of the Vichy regime, even if it involved fighting an erstwhile ally. But with the Allied invasions of North Africa in November 1943, a new element entered in. French troops, after a brief but bloody resistance (which presumably served no useful purpose but to salve the pride and consciences of the Vichy-controlled generals and admirals) laid down their arms, and were then incorporated in the Allied armies. Now, instead of a few isolated Free French units, comparatively large French forces were waging war on the Axis, while the Germans had moved into Unoccupied France.

As the North African campaign ended, with the capture of more than 250,000 Axis prisoners and enormous amounts of material, and the invasion of Italy began, it became obvious that the ultimate goal was the liberation of France. Many officers had already joined the underground, some after much soul-searching. (The first head of the Army Resistance Organization, who was arrested and died in a German prison camp, was a general who had headed the tribunal which condemned General Charles de Gaulle, in absentia, in 1940.) Surprisingly, many more held aloof - although the Allied victories in Africa and in Russia must have warned even the most pro-Vichy that the days of the Third Reich were numbered. Thus it was that after the liberation in 1944, many officers were excluded from the Army of the Fourth Republic.

The Post-War Army

The new army was a curious amalgam of Free French, North African Army, Resistance, and the Regular Army. It was to go through difficult times, suffer severe defeats, and finally, to bring France close to civil war. The quality of the army dropped somewhat—due partly to economy measures which necessitated the discharge of many regular officers

and NCOs. This discouraged many from adopting an army career, when, later, it became necessary to recruit again. Postwar expansion of business and industry attracted many, even a high percentage of St. Cyr and Polytechnique graduates dropping out. There was also an understandable loss of prestige. At a crucial time the army, on which had been lavished so much care and pride, had failed the nation, and when the fight had been clandestinely renewed, the army had, for the most part, stayed neutral—leaving the leadership of the Resistance to civilians.

It was unfortunate that at such a time the French Army was about to embark on the greatest and most costly of its colonial wars. The long (1945-1954) struggle in Indochina, which was to see the Eastern possessions lost to France, cost the French Army everincreasing casualties, with little to show for the butcher-bill. It was a miserable kind of war - against a people determined to end colonial rule, and conducted in a country where in general modern equipment and methods cannot be used to their advantage. Recent advances in weaponry, in the lighter categories, aided the Viet Minh as much or more than the French; and it soon became apparent that campaigns in the jungle and rice paddies against a force which had the support, passive or active, of a majority of the population, were to prove more difficult than those of Italy and the liberation of France.

To make things worse, the war was scarcely popular in France, and the French soldier in Indochina felt himself forgotten—fighting a vicious enemy and an unfriendly climate for no great purpose and with little or no recognition. This disenchantment grew as the war dragged on, with nothing to show but a series of minor defeats and withdrawals, culminating in the disaster at Dienbienphu. After over seven and a half years of war, more than 250,000 casualties among the French and their native forces and expenditures of five billion dollars, the French admitted defeat. It was a crushing blow to French self-esteem—although the French officers and men had fought a frustrating and savage war to the best of their ability.

But further disaster was in store for the French Army. Algeria had been a part of France for generations—a source of pride, wealth, and picturesque fighting men, and a nursery for young officers anxious to win their spurs. Furthermore, it was the home of some 1,250,000 white "colons" whose industry had transformed a backward, savage land into a prosperous country, while Algerian departments were on an equal footing with Metropolitan France. Despite this degree of integration (all Moslems were French subjects) the Moslem population had long felt that

they were being discriminated against. As in many such instances, the demand for equality was soon changed to that of autonomy. Incidents occurred, and a vigorous underground movement, the Algerian National Liberation Front (FLN) came into being. Fighting began in 1954 and quickly developed into a guerrilla war—with a campaign of terror aimed at pro-French Moslems; assassinations, bombings, raids on French farms and industries, direct attacks on French posts, and ambushes of patrols.

If such a war proves anything, it is that to be successful the rebels or nationalists must have the complicity, if not the physical support, of most of the people. And to combat them, the minds of the people must be won. No other means of bringing such a war to a successful conclusion is possible against an enemy who, at will, merges into the population - who, in fact, is the population. Mechanized columns, planes, helicopters are of little use against a foe who can disappear in this fashion. The battle must be for men's minds, and is fought in the school, the clinic, on the farm, and in industry. At the same time, the physical struggle must continue, and, in the case of the French in Algeria, it involved two diametrically opposed operations - one to aid and win the confidence of the Algerian natives and two-to police a large area against an enemy who used terror in all its forms as a weapon.

As usual, some of the means used to repress the terrorist were given far more publicity in the leftist-liberal press than any of the attempts to peacefully win over Moslems from the rebel cause. Any army used to combat underground activities is of necessity obliged at times to use methods which are normally outside the province of the military. In such warfare, the gathering of information is even more vital than in regular operations and the lengths to which the authorities are to go in interrogation of prisoners is one which has become a cause of much controversy. Is the terrorist-group member fair game for any form of third degree, or is he—or she—to be treated as an ordinary prisoner of war with the privilege of keeping a closed mouth.

The argument that it is legitimate to extract information, by whatever means, from a guerrilla, terrorist, nationalist, assassin, patriot, or whatever he may be (and he is likely to be a combination of all five, plus a loving husband and father) is open to question. Granted that such information may save many lives—but so may a soldier's knowledge of a forthcoming offensive. "I dropped my bombs in town," said one Algerian rebel, "because I had no bombing planes to do it," and went on to point out that his

victims were fewer than those caused by French bombing and artillery attacks on native villages. By his standards he was a soldier.

On the other hand, are men who commit deliberate and frightful atrocities (of which the records of the Algerian "War" are only too full) with the object of terrorizing the population, to be treated as soldiers in any sense of the word? Is the uniformed pilot of a plane, who drops a bomb on a city; the terrorist who throws a grenade into a crowded cafe; and his brother, who helps massacre the inhabitants of a village, after first raping and mutilating the women and girls, to be treated alike? It was a question that the French could not answer, nor has the solution yet been found.

(It is entirely possible that at some not-too-distant date, the doctors and chemists will aid the military in the subduing of hostile or "doubtful" civilians by inventing some temporary and harmless "knock-out" gas, and, in interrogation, by the development of a fool-proof "truth serum," thus eliminating a lot of unpleasant medieval-type "questioning.")

In any event, serving as combination of policeman and soldier proved very hard on the sensibilities of many French soldiers, while their handling of the situation raised a great outcry against the military among the liberals and leftists at home. In extenuation it must be said that the immediate reaction of troops to the wanton massacre of civilians is that of any group of belligerent human beings: namely, horror, rage, and reprisal.

The many French officers in Algeria (in 1959 some 500,000 troops were garrisoned in the country) had become increasingly identified with the retention of Algeria as part of France. They had also, in great part, lost sympathy with the politicians at home who, theoretically at least, guided the country. There was increasing talk in France of a settlement with the FLN, and it was this that led to the definite entry of the army into French politics and to the return to power of De Gaulle.

But, to the dismay of colon and soldier alike, De Gaulle decided, for good or ill, that Algeria must be for the Algerians. That this meant the wrecking of the homes and hopes of hundreds of thousands, and also the abandonment of thousands of Algerians, who had braved years of terror and assassination to stand by France, seems to have meant little to the average Frenchman. However, it raised such a storm in Algeria that a last-minute army coup was attempted to force De Gaulle to reverse his decision.

Many dedicated officers took part. But army opinion in general was that the coup would fail. The re-

volted leader's chief support came from six or seven regiments of parachutist, elite troops who felt themselves above the general run of army units, and who had also identified themselves to some extent with the Algerian problem. However, as was to be expected, public opinion in Metropolitan France was overwhelmingly against the mutineers. More important, the young draftees who made up a major portion of the French forces reflected the opinion of the people at home. Had their officers been wholeheartedly behind the coup they might have obeyed orders, but the officer corps was itself divided. The rift between the army and the nation was too apparent, and consequences of a revolt too great for many to take the final plunge, and the coup fizzled out. Some officers were court-martialed and about a thousand resigned, thus eliminating the majority of those most devoted to the cause of Algérie Française. The terrorist activities of the civilian OAS (Organization de l'Armée Secrète) succeeded in further estranging many of the soldiers, for by now, many Europeans felt that the army was against them. And so, though without any military defeat, Algeria went the way of Indochina.

The army of today is, for the first time in 130 years, a purely metropolitan army. Gone are the Spahis and the Turcoes, the Senegalese and the Annamese. Young French officers no longer look for adventure and advancement in the wastes of the Sahara or the mountains of Morocco. Much glamour has vanished, but the army still lives; with some bitter memories no doubt, but all the more ready perhaps to follow De Gaulle in his goal (understandable after all France has been through) of a resurgence of national glory.

The French Foreign Legion

Of all the units of the French Army, there are none who have received a fraction of the notoriety won by the men of the French Foreign Legion, La Légion Etrangère. This is not due to any publicity efforts on the part of the French Army, who have always been inclined to keep the Legion "under the kitchen sink." But novels such as the Victorian best-seller, *Under Two Flags* by Ouida, and later in 1924, Percival Christopher Wren's *Beau Geste* series drew the attention of the English-speaking world to this unique organization—an interest which subsequent novels and movies have kept alive.

While life in the Legion has never been any picnic, some writers seem to have confused the Legion with the dreaded Bataillons d'Afrique, the army's penal units to which were sent the criminals and incorrigibles. These were mainly labor corps, but the Legion itself has been noted almost as much for its building as its fighting — equaling in this the famed legions of an earlier Empire.

The Legion had its beginnings in 1831, and was formed mainly for two reasons, one: to employ some of the discharged and disgruntled foreigners who had served under the Empire and the Bourbon Restoration, and who formed a potentially dangerous element; and two: to provide troops for the new adventure in Algeria, where, to avoid antagonizing public opinion, the fewer Frenchmen killed the better. The first recruits were therefore a rather unruly lot, with a fair share of criminals and other undesirables. (Frenchmen were—and still are—not allowed to enlist, but do so by declaring themselves Swiss or Belgians.) It was from this time that the tradition of "asking no questions" as to a man's past arose.

While some of the recruits (men from the recently disbanded Swiss Guard and the Hohenlohe Regiment, many of whose officers also enlisted) were in a fair state of discipline, the old Legion had, nevertheless, a reputation for drinking and brawling, and the authorities had little faith in its fighting abilities. But firm discipline and hard work pulled the corps together, and by the following year, the Legion was well on the way to establishing the great reputation it has maintained ever since. It was still eyed askance by most of the French military, but grim fights like Moulay Ishmael and Macta added greatly to the Legion's growing reputation, as did its part in the taking of Constantine (1837).

In 1843, among many depots and camps which the French constructed, was that at Sidi-bel-Abbès, which the Legion built into a permanent fortified camp. Sidi ultimately became the Legion headquarters, the "Cradle of the Legion" through whose gates have passed tens of thousands of recruits, in search of adventure, glamour, forgetfulness, to escape poverty or a nagging wife, or whatever drives men to enlist in La Légion Etrangère.

But the Legion has many more names on its battle honors than those of North Africa. In 1854 three battalions from each of the two Legion regiments went to the Crimea, where they distinguished themselves, and in 1859 they fought at Magenta and Solferino. In 1863 the Legion was off to Mexico, and it was there that it fought one of those fights which make regimental history, and which serve as an inspiration

to generations of future recruits. Like many such engagements, it was no great battle of divisions and brigades, but a little affair of a few score men. As it epitomized the Legion spirit and has become a Legion legend it is worth relating.

An under-strength company of sixty-two Legionnaires (mostly German, Polish, Italian, and Spanish) under Captain Danjou—an old-time Legion officer who sported a wooden hand, having lost his in the Crimea—and two junior officers, was on convoy duty. This company, the Third of the 1st Battalion, was surprised by about two thousand Mexican cavalry and infantry. Forming a loose square, the Legionnaires retreated through thick scrub to a deserted hacienda at Camerone, keeping the enemy at a distance with volleys from their Minié rifles. Sixteen of the company were cut off and taken prisoner before they reached the farm, and when Captain Danjou marshaled his forces for the defense, he had but forty-six men, of whom several were already wounded.

The mules with the rations and spare ammunition had bolted, and to make matters worse, some Mexicans had reached the farm first and installed themselves in the upper story of the house, where they could not be reached. In this unlikely position, with part of his dilapidated fortress already in the enemy's hands, the gallant captain decided to fight it out. Beset by the Mexicans outside and the marksmen in the farm building itself, the company fought a grim battle. Danjou fell dead and Lieutenant Vilain assumed command, only to fall himself a little later. Assault after assault was beaten back, but after nine hours, Second Lieutenant Maudet had only five men on their feet. Giving the order to fix bayonets, Maudet led his men straight into the Mexican infantry, where they were dragged down by overwhelming numbers. Maudet and two others died of their wounds, but three survived, two of whom were commissioned after their release from captivity. At least three hundred Mexicans were killed and as many more wounded.

A relieving column arrived next day, and in the ruins found the artificial hand of Captain Danjou. This rested, until recently, at Sidi-bel-Abbès, and on April 30—Camerone Day—is ceremoniously paraded before the 1st Regiment.

Such was the epic of Camerone, and of such stuff is the soul of a regiment made.

From the battle honors of the Legion can be read the history of the French overseas Empire and of the Republic: The Franco-German war, Tonkin and Indochina, Dahomey and the Sudan, Madagascar, Morocco, the First World War, the Near East, Salonika, Syria, World War II, from frozen Narvik to burning Bir-Hackeim, Indochina again, and Algeria. The French have a custom of decorating their Regimental Colors and none in the army have received more decorations than those of the Legion.

The makeup of the Legion has usually been an indication of the economic or social upheavals of Europe. Spaniards, Poles, Italians, White Russians were at various times predominant, but for many years, the majority of Legionnaires have been German. There have always been a sprinkling of all nationalities, including, it is said, a pigtailed Chinaman.

The great number of Germans have been something of an embarrassment in the two world wars. In World War I they remained in Algeria, where they did good service. Just before World War II, when some 80 per cent of the sous-officiers were Germans, the Nazis mixed agents in with the German recruits, but many of these were interned at the outbreak of war. After France fell, pressure was put on Vichy to disband the Legion, but not only was this resisted, but efforts were made to keep "wanted" anti-Nazi Germans from being repatriated.

Legionnaire-Indochina, circa 1884



As well as every conceivable type and class of working and professional men, the Legion has had its share of the great in its ranks, including generals and a German prince, whose body was shipped home in a German warship. For some reason the hodge-podge of races has included very few Americans or English (despite Beau and his brothers).

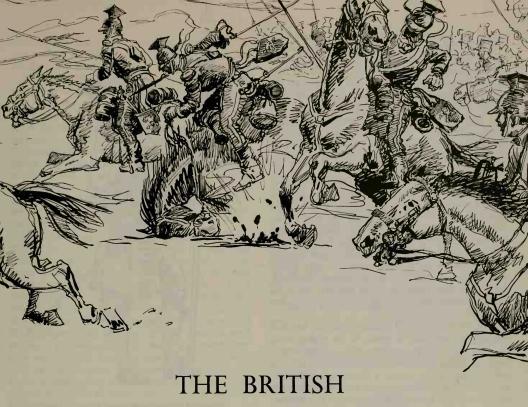
The strength of the Legion has varied greatly, from a few battalions to several regiments, including parachute regiments, armor, and specialized units. The size of the Legion during the war in Indochina, 1945–54, in which it won fresh laurels, can be judged from the casualty list, which shows 10,168 Legionnaires and 314 officers killed, and over 30,000 wounded (at Dienbienphu, seven out of twelve battalions were of the Legion).

Enlistment is for five years, with a small pension after the third "hitch." Age is officially from eighteen to forty, but no papers of any kind are required, so there is some leeway. Fingerprints are taken, however, and wanted criminals can no longer escape their just deserts by hiding in the ranks. Desertion has always been a problem. Lacking the civilian ties which

prevent the average soldier from disgracing himself or his family by such a crime, the Legionnaire, usually a hard type in any case, is more prone to go "over the hill" than the French-born conscript. Against this, may be set the strict discipline and fantastic esprit de corps which mark the Legion, and account for its magnificent battle record. Indoctrination in regimental traditions has welded recruits from many nations into a fighting force second to none. The last of the great mercenary corps, it has little in it of patriotism — many of its Legionnaries have small use for France — but great pride in itself.

When the French Army finally withdrew from Algeria, the Legion marched out of Sidi-bel-Abbès for the last time, and ended a chapter in the history of a grand corps. The General Staff is now at Aubagne in Southern France and the training group is in Corsica. Whether, now that France's overseas Empire is gone, there will still be a place for the Legion in the French Army remains to be seen. It seems unlikely that the French, with their keen sense of history and tradition, would disband so disciplined and efficient a

corps, with such a glorious past.



It has been well said that the English are warlike, but without the patience to be military. And anyone reading the story of the island Empire's war efforts over the years must inevitably be struck by the amateurish style of many of the performances. Surprisingly enough, however, by a certain doggedness of character and much pluck and luck, most such performances have turned out to be rousing

successes. Muddling through seems as much a part of the national temperament as tea and kippers. Yet the country has produced some of the world's most original and brilliant soldiers and sailors, who have

displayed military virtues of the highest order.

Occasionally some of these leaders have bordered on the eccentric. Along with the most hide-bound and conservative men imaginable, the English have begotten the world's rarest collection of odd customers, and while not crack-pots in any sense, men like "Chinese" Gordon, Lawrence of Arabia, and Sir Fran-

cis Wingate of Burma fame cannot be classed as orthodox in their ways. Nor were naval men such as Lord Thomas Cochrane, "Jackie" Fisher, or the great Nelson himself exactly run-of-the-mill sailors.

In the inventive field, the British pioneered such things as the shrapnel shell, the iron warship, the barbette-type turret, the tank, the aircraft carrier, the depth-charge, the hydrophone; and later, asdic, radar, the angled flight deck, the steam catapult, and the mirror landing device, to name a few. In 1914, an R.N.A.S. pilot, in the world's first dive bombing attack, destroyed a Zeppelin in its shed at Düsseldorf, and in 1940, Suka dive bombers of the Fleet Air Arm sank the cruiser Königsberg, the first major warship to be sunk by air attack.

Sad to relate, however, during the nineteenth century muddlers had much say in the affairs of both services. Needless defeats and disasters were caused by bungling both by the War Office and the Admiralty,

and by the superannuated dunderheads in command in the field. In this, the Army was the greater sufferer, the exigencies of command afloat doing much to weed out incompetents in their early years. Moreover, this bungling, which in many cases was retrieved by the valor of the troops in the field, was viewed with some degree of complacency by the general public and their leaders. There is a peculiar streak in the British which enables them to forgive and forget unfortunate military ventures, as long as the affairs are carried off (as they almost always are) with displays of heroism and devotion to duty.

The fighting retreat, carried out with grave loss but great courage, after some particularly inept piece of military blundering, has more popular appeal than a brilliant action which encompassed the enemy's destruction with much finesse, and few casualties. Paintings entitled Saving the Guns or The Last Stand of the Mudfordshires have, or had, great popular appeal, without much thought being wasted on what idiotic orders got the battery or the unfortunate Mudfordshires into their predicament in the first place; or more important, how to avoid such happenings the next time.

Much of the trouble, of course, lies in the fact that democracies are loath to spend, in the piping times of peace, the money necessary to keep their armed forces up to the barest minimum essential to national safety. There is also always a strong anti-militaristic group, who battle bitterly against such necessary evils as conscription, build-up of armament for defense, and "wasteful" experiments on new weapons. Thus a democracy inevitably enters a war under a severe handicap, and valuable time for preparation has to be bought by the blood of those regulars on the peacetime establishment.

Three hundred years ago the people of England welcomed back Charles II, after an experiment in military dictatorship which, while militarily most successful, had proved distasteful to the country as a whole. While admitting the necessity for a standing army, the governing of such a body was now placed in the hands of Parliament, and so hedged about with restrictions that any form of interference by the military in the affairs of government was, and still is, all but impossible, as well as unimaginable. This is true in the United States as well as in Great Britain, and any form of military coup is completely foreign to our way of thinking.

However, it is well to remember that such a relationship between civil and military authority is dependent ultimately, not on rules and regulations—these may be changed, set aside, or evaded—but on



Sergeant of the Coldstream Guards, 1666

the will-to-democracy of the people as a whole. This, unfortunately, is not a rock-hard, immutable object, but an intangible - dependent on intelligence, emotional stability, and tradition. Neither, as we are finding to our cost, is it an exportable commodity. We in America have made the mistake of assuming that, by the wave of a wand, nations whose thinking, customs, and way of life are alien to us are suddenly going to assume the attributes of peoples whose democracy is rooted deep in the experiences of the past. Each nation must work out its own salvation in its own way -each must have its Magna Carta and its Bill of Rights, its Gettysburg, and its Marston Moor. All that can be done is to assure these countries that the choice will be theirs, and to protect them from outside interference and domination, both physical and mental, while they attain the stature to make that choice. The colonel's revolts and military juntas and men on white horses who plague our neighbors are symptoms of disease, bred by the ignorance and indifference of

the citizenry. Instead of raising our hands in horror and disdain, we might better reflect that "there, but for the grace of God, go we!"

The phenomenal success of the British fighting man, despite his somewhat lackadaisical approach to war in general, was due in part to his temperament and in part to the fortunate circumstances which provided an officer class with unsurpassed qualities of leadership.

The combination of the younger sons of the landed gentry, with deep feelings of honor, loyalty, and service to the Crown; and a soldiery sprung from fighting stock – steady, brave, intelligent (as soldiers went), and stubborn – proved a happy one. Coupled with a service rich in tradition, this made an Army which, man for man, has seldom been equaled.

The main thing wrong with the British Army was the British Navy. "Britannia needs no bulwarks, her towers are on the deep" sang the poet, and for centuries the island kingdom lavished far more attention on her fleets than on her armies. And rightly so, for a colonial Empire was dependent on the control of the seas. The country was better served by a small force of professionals than by the conscript-type armies of the Continent. As long as Britain confined welt politik to pressure applied by her Navy, no mass-armies were needed. Invasion scares there might be—then, as now, few could appreciate the tremendous difficulty of transporting and maintaining an army across even twenty miles of water—but as long as she controlled the Channel, there was no real danger.

So the Senior Service received the lion's share of the military budget, and the Army, considering the population and the extent of the Empire, was exceedingly small. Cromwell's fine Army of 80,000 was disbanded at the Restoration - the sole survivor of the New Model being Monk's regiment of foot, now the Coldstream Guards. The Household Cavalry regiments were raised by Charles II, as was the infantry regiment which is now the Grenadier Guards. These regiments, and the familiar Yeomen of the Guard, some three thousand in all, were for some years the only permanent force. Others were added gradually, among them the Royal Scots, who trace back to the Scots Brigade which fought with Gustavus Adolphus and who, because of their antiquity, proudly bear the nickname of "Pontius Pilate's Bodyguards."

The early history of the Army is one of hurried augmentation in time of war, and as hasty reductions in time of peace—setting a poor pattern for both great democracies. Thus, from 65,000 in King William's reign the numbers dropped to 19,000, and as speedily rose during the Wars of the Spanish Suc-

cession. However, of the 200,000-odd serving at that time, only some 70,000 were British, the rest being hired to fight on the Continent. While the British Isles were small, and the Army weak, the coffers even in those days, were usually full enough to employ some of the stout soldiers whom the German princes conscripted and hired out, to help balance the princely budgets. These mercenaries were to be found in the British service until after the Napoleonic Wars, and depending on their organization, officers, etc. were often excellent troops. It must also be remembered that the Georges were heads of the House of Hanover, and troops from their territory were also to be found in the British ranks.

From some 75,000 men in the years of the War of the Austrian Succession, the peace of Aix-la-Chapelle (1748) saw the number drop again to less than 19,000—while from 246,000 in 1812, the Army after the Napoleonic Wars numbered only some 75,000, many of whom were garrisoned throughout the growing Empire.

So it went, but through it all the continuity held. Some new regiments were raised but, in general, the sound principle of increasing the number of bat-

Private soldier-Line Regiment, 1712





Cornet of Horse, 1745

talions in established regiments was adhered to. Thus the recruits became at once part of a corps with a regimental history and tradition, half the battle in building morale.

The performance of the British troops during the Peninsular War and later at Waterloo left them with a splendid reputation. Perhaps never has the prestige of the British nation stood so high as it did in the years following the defeat of Napoleon. The British Army had, of all nations, repeatedly beaten the French, often at long odds, while the fleet - the victors of Aboukir Bay and Trafalgar-was unchallenged, and unchallengeable, throughout the world. The great days would not last, and new armies and navies would arise to challenge the helmeted lady with the trident. But the years of victory must have been sweet, indeed, and the Victorian could view with complacency a mighty fleet, a gallant Army, thriving industry, and an Empire on which the sun never set.

Empire Builders

This matter of Empire occupied the attention of the British Army for the better part of the nineteenth century. With the exception of the Crimea, no British troops set foot on the Continent from Waterloo until 1914, but a succession of little wars took the British soldier to the far corners of the earth; and where he went, civilization followed. "We broke a King, and we built a road," wrote Kipling, who hymned the great song of that Empire and its soldiers. Those were the days when the white man was not ashamed of his burden, and when peace and order, bridges and schools, hospitals and courthouses were considered more important than home rule and self-determination. Very sure of themselves, were the Victorians, and their utter self-assurance enabled them to face odds and surmount obstacles that would have daunted lesser men.

Like master, like man, and very naturally the self-confidence of the upper-class Victorian empire-builder rubbed off on the men under his command. One white man was worth a hundred "niggers" (the "niggers" of course, might well be gentlemen whose ancestors were civilized, while skin-clad Britons were still staining themselves with woad). Believing this, the British soldier set out to prove it. Surprisingly, he often did: a striking testimony to a combination of training, discipline, cold courage, and a colossal superiority complex.

It was this spirit that conquered India—and reconquered it in '57 and '58. It was the same spirit which enabled a handful of Europeans to carve up great sections of Africa. While the spell of white superiority and invincibility lasted, it enabled them to hold these peoples, little islands of white in vast seas of black and brown.

The common soldier of the first half of the nine-teenth century was still to a great extent a country-man. The industrial revolution was rapidly changing the social structure of the nation but the soldier in the ranks was still likely to be a farm boy, bored with the bucolic existence of some sleepy hamlet—ready to swallow the recruiting sergeant's spiel about the joys of Army life, and to take the queen's shilling. Up to 1847 this meant enlistment for life, but the Limited Service Act of that year reduced the period to ten or twelve years, with option to re-enlist to complete twenty-one years.





Royal Horse Artillery 1815

Life in the ranks was no picnic in those days, but neither was life on the average small farm, and many a lad was better fed and clothed in the Army than he had ever been before. In even ten years the regiment became home to the average man, the Colors his sacred trust. Regimental history was absorbed and traditions carefully fostered, so that, while allegiance to King or Queen and Country might be but dimly felt, the honor of the regiment was a very real thing indeed.

The British are fully aware that regimental traditions are a great factor in building morale, and the customs and memories of the regiments of old have been carefully preserved and handed down to the present. If the fact that he and the rest of his regiment are privileged to wear a rose in their caps on the First of August helps a young soldier endure a dive-bombing attack with a little more equanimity, or spurs him to leave his trench and move forward to the assault when ordered, then the yearly rose has proved well worth while.

Actually, six "Minden" regiments, at the cost of one-third of their number, won the right to wear the rose on the anniversary of that glorious day. With roses plucked from adjacent gardens in their tricorne hats, they advanced in two lines, flanked by Hessians and Hanoverians, straight at the French Cavalry. Sixty-six guns tore great gaps in their ranks, but with drums beating and colors flying the six regiments marched steadily forward. The great mass of horsemen, seventy-five squadrons, swept down, but meeting them in line, with rolling volleys the redcoated infantry smashed six charges. Then, continuing their advance, they overthrew several brigades of infantry, so shaking the morale of the French that they quit the field in confusion.

On the evening of April 22, 1951, six Chinese divisions, more than 50,000 men, struck the U.K. 29th Brigade - one battalion each of the Royal Northumberland Fusiliers and the Gloucestershire Regiment and an attached battalion of Belgians. The Royal Ulster Rifles, 25-pounders of the R.F.A. 45th Field, R.A. and tanks of the Eighth Hussars were in support. The Belgians, cut off, edged to the flank and got away with little loss. The main attack fell on 622 men of the "Closters," holding four miles of front. Company A was swamped in the first rush and ROK troops on their left were forced to retreat. By radio the Glosters were ordered to hold their high ground, while the 25-pounders blasted away in their support (they were to fire more than a thousand rounds per gun!). All next day - April 23 and through the 24th - the Glosters held. Chinese dead in the thousands lay in front, but more thousands swarmed in flank and rear. B Company now numbered one officer and fifteen other ranks. Desperate but futile attempts were made by Americans, Filipinos, Puerto Ricans, and Belgians to reach the battalion. Dawn of April 25 brought orders to the remnants of the 29th Brigade to pull out - they had done their job and the line would hold - but the Glosters were surrounded, deep behind the Chinese lines. Half of them were down now, and ammunition almost all gone. The order came for those able to move to try to break their way out. The colonel, the regimental sergeant major, the medical officer, and the chaplain stayed with the wounded. Thirty-eight men of D Company, aided by American tanks, came out!

On March 21, 1801, near Alexandria, Egypt, the Glosters (the 28th Foot in those days) were attacked by the French. As the volleys blazed out from their two-deep line, another French column was seen through the smoke, moving directly on their rear. On command, the rear rank about-faced and the regiment stood back to back. The fight was a sharp one but eventually both attacks were beaten off. In recogni-

tion, the 28th was given an honor granted to no other corps, the right to wear a second regimental number on the back of its headdress (this has now been replaced by a small badge bearing a sphinx). The battle honors of the regiment, which dates back to 1694, bear forty-four names, the longest list in the British Army. But of those honors, that of the Sphinx, superscribed "Egypt," is the proudest, and many a Closter who fought back to back with his comrades on the Korean hill, fought a little better because his beret bore a badge at the back as well as the front.

Nicknames are treasured, as well as battle honors. Some like the old 57th, now the Middlesex Regiment, earned theirs with blood. "Die hard!" their wounded colonel told them at Albuera, and so they did. Of 570 men who carried their bayonets into the fight only 150 came out. The 11th Foot, now the Devonshire Regiment, marched away from the victorious field of Salamanca only 67 strong, earning the title, "the Bloody Eleventh." Others were in a lighter vein. The 50th, because of the black facings on their scarlet tunics, were known as "the Dirty Half-Hundred," while the 11th Hussars, whose pickets were once surprised in an orchard, rejoice in the name of "Cherry Pickers."

But tradition is only one brick of the many which go into the building of a fighting unit. Training and discipline were in great part the province of the non-commissioned officer, and these, the backbone of any Army, were on the whole a sober, hard-working, responsible group of men. Abuses there undoubtedly were, and many a new stripe was the excuse for bullying and the throwing around of a little weight. On the other hand, the Army recruit in those days was a pretty tough character, and considerable firmness was needed to keep him in line. In many instances, the "hard lots" made the best fighters, and the regimental heroes were often those whose back had most often been "scratched" with the cat.

In defense of the soldier let it be said that it was not until the 1870s that anything much was done about living conditions, recreation, etc. Prior to that time, troops lived in bad quarters, ate bad food, and their sole amusement was to get drunk in the canteen on bad liquor sold at high prices. Harsh discipline and boredom accounted for many desertions, while nicknames such as "the Steelbacks" and "the Bendovers" immortalized some CO's belief in the lash (flogging was only done away with in 1881).

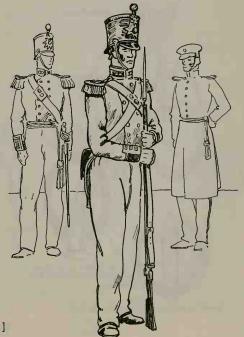
Despite the general conservatism of the times, the latter part of the eighteenth century had seen many innovations, which were as startling in those days as were some of those of 1940–45. The "Light Infantry"

sprang from experiences in wilderness warfare in the French and Indian Wars in America. Men picked for toughness and intelligence were equipped lightly and sensibly and given training based on that of the famous Rogers Rangers. So successful was this experiment that one light company was formed in every infantry regiment. Later on, entire regiments became light infantry, a mark of distinction.

The year 1787 saw the formation of the Royal Engineers as a separate corps, although the corps of Royal Sappers and Miners remained apart until 1856. In 1793, the Royal Horse Artillery came into being, and in 1797 the first rifle battalion appeared in the British Army, to be followed in 1800 by the 95th, now the Rifle Brigade. The dark green uniforms and black buttons, frogs, etc. were the first step away from the traditional red to the less spectacular but more practical khaki.

Experiments with rockets had been carried on by a Colonel Congreve, afterward Controller of the Royal Laboratory, and in 1805 a rocket troop was formed. These missiles, developed from those used by some Indian princes, caused more alarm than ac-

Honorable Artillery Company private and officers, 1848

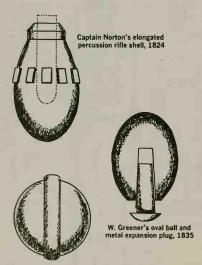


tual damage—even at times to those who fired them, as they had a tendency to reverse course and return, like fiery boomerangs, to their owners. However, a rocket detachment played some part in the great battle of Leipzig (1813)—the only British unit present—and massed discharges set Copenhagen on fire (1807). Rocket troops were used with varying success against natives in the colonial wars, and improved varieties were in use as late as the 1880s. The idea, that of a self-propelling missile needing no heavy tube or carriage, was a sound one. Its development was hampered by lack of a stable propellant, gunpowder being unsuitable for various reasons. When this problem was solved, in the early part of World War II, the rocket became a most effective weapon.

There is some parallel between these developments and those of the Second World War—commando units, specialized engineers like R.E.M.E. (Royal Electrical and Mechanical Engineers), and the substitution of mechanized artillery for the slower horsedrawn pieces. Unfortunately, the years following Waterloo were singularly free from any attempt at innovation, and all who tried were discouraged by the conservative and unimaginative men in charge at the War Office—or Horse Guards—as it was then called.

For instance, a design by a Captain Norton for an

Unsuccessful innovations



Belted ball for two-groove Brunswick rifle, 1836

expansive, elongated rifle ball, with an explosive head, was turned down in 1825, although tests had proved successful. The Select Committee on Fire Arms also turned down an expansive-type bullet invented by Greener in 1835. In 1853, £20,000 was paid the Frenchman, Claude Minié, for his very similar invention! Finally in 1857, Greener was awarded £1000, Norton got nothing.

The rifle adopted in 1836 by the Committee to replace the old Baker was the two-groove Brunswick, using a round, belted ball. This was not only hard to load in a fouled rifle, but was most inaccurate. Only a few regiments were issued these monstrosities, the smoothbore musket still being considered good enough for the Army as a whole. The only bow to modernization was the adoption of the percussion cap in 1839. (Alexander Forsyth had taken out his first patent in 1807, but things moved slowly in those days.)

In all else "As you were" was the motto. Much attention was paid to drill, and the use of pipe-clay and brass polish. Commands of regiments were still bought, and promotions were purchased, condemning the poorer professional soldiers to slow advancement, or none at all. The Army in England was totally unfit for war. Organization there was none, nor any proper administrative departments. Massed maneuvers were undreamed of – the nearest thing being a battalion "field day" – a sort of regimental picnic, with many admiring ladies and much popping of blank cartridges – and corks.

Strangely (or perhaps, such is the working of the human mind, naturally) officers who had seen service in India, where a succession of hard-fought campaigns kept the troops on their toes, were bitterly resented, and their advice, if they were rash enough to offer any, was ignored. The clique of high-born nincompoops who headed most of the departments, and many of the regiments, wanted no disturbance in their ordered existence of parades, reviews, hunts, and banquets.

The Crimean War

The Crimean War is often cited as the horrible example of what "Noodledom" could accomplish. It certainly served to expose the ignorance and incompetence of many officers and government officials. More important, it brought to light the shortcomings of the cumbersome system of army administration



Officer-74th Highlanders, 1853

and command. It did so only at the expense of great suffering on the part of the soldiers themselves, exposed as they were to the blunders of their leaders, and the inclemency of a Crimean winter.

No war machine functioned in those days as smoothly and efficiently as they do today, but the bungling of that campaign, by French and Russians, as well as the British, makes incredible reading. Staff work was unbelievably bad. Although a department at the Royal Military College for the training of staff officers had been formed more than sixty years before, only fifteen of more than two hundred staff officers with the Crimean Army had attended it. The rest were for the most part relatives and friends of the various generals—the C.-in-C., Lord Raglan, having five nephews on his own staff!

His lordship had himself served on Wellington's staff, and, at sixty-five, had never led even the smallest unit of troops in action. Like most of his class, Lord Raglan was as totally oblivious to danger as he was unmindful of discomfort or pain (while lying on the surgeon's table after Waterloo, he demanded the return of his newly amputated arm so that he could remove his ring). He was gentle, courteous, kindly, an aristocrat, and a dyed-in-the-wool reactionary. He, too, had strong opinions regarding "Indian officers,"

and word was passed around that they were to be discouraged from joining the Crimean Army.

The troops themselves were magnificent, as they proceeded to prove at the Alma. There, although decimated by cholera and suffering from dysentery, they carried the heavily fortified heights in grand style, performing under fire, as the French commander in Crimea, François Canrobert, put it, "As though they were in Hyde Park." The Guards were in a dangerous position and it was suggested they be withdrawn. "It is better," said stout Sir Colin Campbell, "that every man of her Majesty's Guards should lie dead on the field than that they should now turn their backs on the enemy." The Guards were not withdrawn—and another famous sentence was added to military lore.

It was Sir Colin who held Balaclava when the Russian horsemen advanced on it that fateful October 25. Between the British base and the oncoming Muscovites stood 550 men of the 93rd Highlanders and a hundred convalescents of the Invalid Brigade, drawn up two deep, "the thin red line" of the history books. The line held — had even to be restrained from

Trooper of 2nd Dragoons (Royal Scots Greys), 1854



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attacking the cavalry, who retired - but the main events of the day were yet to come.

History has made much of the Charge of the Light Brigade – but, spectacular and legend-making as that was, it was, militarily speaking, a sorry accident. The charge of the Heavy Brigade, on the other hand, was a fine feat of arms.

The brigade, General Sir James Scarlett commanding, was moving to the support of the Highlanders when they became aware of the main body of Russian cavalry, a solid mass some four thousand strong, above them on the slope of the strategic Causeway Heights. Searlett's force consisted of eight squadrons of heavy eavalry - which disease had reduced to about five hundred men. As the Russian column moved down at a trot, the British squadrons were swung into formation, and, to the Russians' amazement, considerable time was then spent dressing and redressing the ranks, somewhat broken by rough ground. Russian officers afterward admitted that the cool parade ground conduct of the tiny force had served to shake their men's morale. The Russians made the mistake of halting. As they did, the British trumpets sang out the eharge, and the Heavies launched themselves at the squadrons above them.

Searlett, fifty yards ahead, crashed into the enemy array followed by the troopers of his first line. To watchers on the surrounding heights, it seemed as if the British simply disappeared, but the gray mass was seen to shake and heave and deep within it flecks of red appeared. When the second line smashed in, this movement became more violent and the huge body surged up and downhill, while swords sparkled over it and a deep roar like that of the sea arose. The remaining two squadrons, delayed by encumbered ground, struck into the flank, and hacked their way through from one side to the other. Suddenly, to the astonishment of the watchers, the great swarm of Russian horsemen broke and fled, leaving the field to the exhausted British.

The story of the second great charge of the day has been told too often to retell here. But the leader of it, Lord Cardigan, was a character who, while perhaps not typical, was an example of the aristocrat-soldier at his worst, and of the power which rank, wealth, and influence could wield in the army.

Mention has been made of the "Cherry Pickers." James Brudenell, Earl of Cardigan, had achieved notoriety (and a vast amount of popular disapproval) as head of that regiment, whose lieutenant colonelcy he had purchased for a reputed £40,000. He had previously been in command (also purchased) of the 15th Hussars, from which post he had been removed

after his stupidity, bad temper, and colossal arrogance had involved him in much controversy (well publicized) with his officers, and finally in a court-martial. His subsequent appointment to the 11th was greeted by a storm of public protest, but Cardigan had friends at Court. Nor did a further series of incidents, in which he attempted to force all "Indian" officers (the only ones with any war experience in the regiment) to resign or sell out, have the effect of removing him. His aim was to have the "Cherry Pickers" officered by rich young aristocrats, who could afford the lavish scale of the mess, the resplendent uniforms, and expensive mounts. The "Indian" officers, quiet, methodical career soldiers for the most part, did not fit in with his scheme of things.

Whatever talents he possessed were those of a sergeant major. His regiment was drilled half to death, and was as noted for its smartness on parade, the splendor of its uniforms, and the magnificence of its mounts—on which he lavished a fortune—as for the large population of its guardhouse. Of skill as a cavalry leader he had none, and his appointment in 1854 as brigadier in charge of the crack Light Brigade

raised a further howl of protest.

He was, of course, as brave as a lion, and, on receipt of the fatal order that October day, he turned to his place in front of the doomed squadrons with the remark, "Well, here goes the last of the Brudenells." Without once turning his head, he trotted his chestnut, Ronald, down the smoking, shell-torn valley - his straight figure resplendent in cherry-colored overalls, blue and gold pelisse, fur busby, sabretache and much gold lace. When the ordered advance turned into a mad gallop, he was the first man into the battery. Riding on, while the remnants of the front line were hacking away in the dense smoke at the Russian gunners, he came face to face with a large body of enemy cavalry. Evading capture, though slightly wounded, he cantered back through the guns; the line of cannon now tenanted only by the dead and dying. Smoke hid the furious fighting on the flanks, and, as he afterward wrote, having "led the Brigade and launched them with due impetus, he considered his duty was done." Rallying the survivors, if any, he considered beneath him, nor did he show the least concern for the fate of the Brigade. Very slowly and deliberately he rode back up the still shot-swept valley.

Cardigan did await the return of the survivors, asserting that, though "a mad-brained trick," it was no fault of his. Then, after a few angry words with Lord Raglan, he rode off to his yacht (he lived aboard in great style, not deigning to share the discomforts of the campaign with his brigade), to a champagne supper, and to bed. Of some seven hundred who charged with him, only 195, many of them wounded, returned.

Inkerman, the "Soldiers Battle" on November 5, 1854, was one of the British infantryman's hardest fights. This was a confused affair, fought on broken hilly ground in a heavy mist. It was notable for the aggressive defense of the field—small bodies, sometimes of company strength or less, unhesitatingly attacking large Russian columns, with much savage hand-to-hand fighting with butt, bayonet, and even bare hands.

Stories of hardship and privation were transmitted to England by war correspondents—then almost a new breed. Chief among them was William Howard Russell of the all-powerful *Times*. Their reports (there was no censorship in those days nor any form of army public relations) caused as much consternation in the Crimea as they did in London. As Lord Raglan indignantly pointed out, their stories, some of them exaggerated, of the sorry conditions of the Allied troops gave considerable comfort to the enemy (the information was transmitted from the newspaper articles in London, via St. Petersburg, to Sebastopol) and the disclosure of military affairs was so indiscreet as to furnish positions of batteries, magazines, head-quarters, and dispositions and numbers of troops.

Conditions were undoubtedly very bad, but the blame belonged more on the government than on the commanders in the field, who seem to have done the best they could with the very limited means at their disposal. Improvisation, brilliant as it may be, cannot take the place of careful planning. The hospital arrangements were particularly bad - in fact non-existent. Cholera had riddled the Army since the beginning, and the winter brought scurvy, frostbite, pneumonia, and other ills. The overworked government medical department was aided, as was that of the United States in the Civil War, by civilian Sanitary Commissions. The overcrowded hospitals at Scutari were the scene of the devoted Florence Nightingale's efforts, efforts which transformed hospital work for all time.

The nation, once aroused, set about remedying the situation, and the men who perished so miserably and so unnecessarily before Sebastopol that bitter winter did not die altogether in vain. The Land Transport Corps, which had been raised for the duration of the war, was continued as the Military Train and was later (1888) joined with the Commissariat Department to form the Army Service Corps. The Army Hospital Corps, now the Royal Army Medical Corps, was another outcome of the Crimea. Formerly any men needed for hospital duty were borrowed from

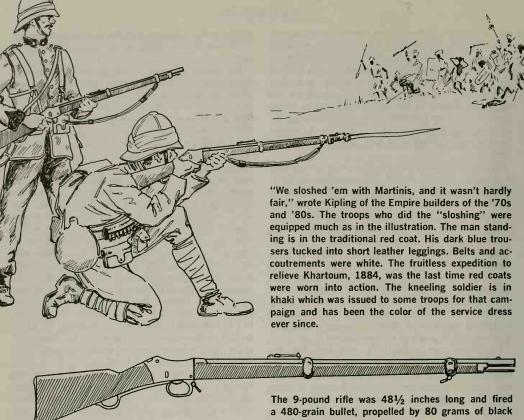
nearby units, and, as soon as they had learned enough to be useful, were likely to be returned to regular duty.

The higher echelons of the service remained for some years the almost exclusive domain of the nobility, but the purchase of commissions was abolished in 1871, over much opposition. Better barracks, better food, and even some attempts at providing recreation, libraries, and educational facilities marked the second half of the century—the Army moving with the times, although usually somewhat reluctantly.

The soldier in the ranks was still considered a low form of animal life, and generally shunned by the public - in peacetime, that is. Kipling's "Tommy Atkins" tells the tale well, with his, "Tommy! stay outside," until the next little war came along, when it was "Special train for Atkins when the troopship's on the tide." On the other hand, although the road was a long and hard one, it was possible for a bright and hard-working youngster to rise from the ranks. Such a one was William Robertson, who joined the 16th Lancers in 1877 at the age of seventeen and wound up as Field Marshal Sir William Robertson, Bart. G.C.B., G.C., M.G., K.C.V.O., D.S.O. His From Private to Field Marshal contains many interesting sidelights on life in the ranks in the old army. The soldier of today, used to his well-stocked mess tray, would have found the daily pound of bread and 34 lb. of meat unappetizing. Other groceries were paid for by the men out of their meager pay of 1s.2d (about 28¢) per day. Counting deductions for washing and certain articles of clothing, cleaning equipment, etc., the average soldier was lucky if he had a shilling for pocket money at the end of the week-enough for one gallon of beer in those happy days.

In arms and equipment the army of the mid-nineteenth century was about on a par with other Continental armies. The muzzle-loading .577 Enfield rifle was a fine weapon, considered superior to the U.S. Springfield, and used in great quantities in the Civil War. At the time when all nations (except the Prussians, who had their needle gun) were looking for a workable breechloader, the British converted the Enfield by use of the Snider (American) patent sidehinged breech block. This conversion, issued in 1866, fired a metallic cartridge containing a detonator. The weapon, although only a stop-gap until a better could be designed, was still fairly effective - the self-sealing metal cartridge being a great improvement over the self-consuming types used in the needle gun and the Chassepot.

It was, of course, of .577 calibre – an unnecessarily large bore, and in the Martini, which supplanted the



Snider in 1871, this was reduced to .45. This weapon was a lever-operated, single-shot, hammerless rifle, sighted to 1000 yards. It could be loaded and fired quite rapidly—unaimed fire—20 rounds in 48 seconds, and was capable of putting a bullet in a 12-inch circle at 300 yards. At 500, this jumped to a two-foot circle—which meant that a good shot had a fair chance of hitting a man at that distance. The heavy bullet had good shocking power, and needed it! While the weapon was in service in the British Army it slew countless Zulus, Sudanese, and other Africans of various description, as well as Afghans and assorted Orientals, many of whom took considerable stopping.

But before the adoption of the new breechloaders, the Army was to wage one of its hardest-fought campaigns. The smoke had hardly cleared in the Crimea before a serious mutiny, which had its origins in obscure political and religious affairs, broke out among the sepoy regiments of the Army of Bengal.

powder.

The Sepoy Mutiny

The military position in India was unique, involving as it did British regulars of the Queen's troops, and the mightiest "private" army the world has ever seen. This force belonged to the great East India Company, and at the time of the Mutiny amounted to 38,000 British, of which some 21,000 were Queen's troops, with 276 guns; 248,000 trained sepoys under British officers, with 248 guns; and 100,000 local levies and irregular troops. It had grown from small detachments of natives, raised to protect the early trading posts and trained in the European fashion, to a splendid army, or rather armies, representing the presidencies of Bengal, Bombay, and Madras. Side by side with troops from the regular British Army it had

fought some of the most famous battles of British military history—Plassey, Assaye, Meanee, Sobraon, Chillianwallah, and Goojerat. The sepoys, drawn mostly from India's great fighting races, were devoted to their regiments and their colors, and, in many cases, to their white officers. These, in turn, looked on the men of their commands, who had fought and bled with them on so many hard-fought fields, as their children, to be petted and pampered, trained and disciplined, but, above all, to be trusted.

This was the tragedy of the Mutiny—that, while regiment after regiment was revolting, the officers of other regiments refused to believe that *their* men should not remain true to their salt. And so they stayed—many of them with their families—until shots and screams and the glare of burning cantonments woke them, usually too late, to reality.

Though the mutiny was in general confined to the sepoys of the Army of Bengal, there were times when British rule in India trembled in the balance. It was at such times that both leaders and men rose to the occasion, and performed great feats of courage and endurance.

No quarter was given the mutineers - the terrible massacre at Cawnpore, where women and children were cut to pieces in cold blood, was fresh in men's minds. When roused, the usually quiet Briton can be as savage as his ancestors, as the capture of the Sikandarbagh at Lucknow, an enclosure some 130 yards square with twenty foot walls, shows. More than 2000 sepoys were crowded behind the loopholed walls, but two guns were manhandled close enough to blow a hole three feet in diameter in the wall. Loyal sepoys, Britons, and Scots raced each other for the glory, and certain death, of entering first. The breach was won, more troops poured in and the mutineers inside, now trapped, fought with desperation. Wrote Field Marshal Lord Roberts, V.C., himself a young officer of twenty-five at the time and one of the first through the hole: "Inch by inch they were forced back to the pavilion, and into the space between it and the north wall, where they were all shot or bayoneted. There they lay in a heap as high as my head, a heaving, surging mass of dead and dying inextricably entangled."

In all the welter of treachery and murder, hangings and blowings from guns, the loyalty and gallant behavior of many natives, both sepoys and civilians, makes grateful reading. When the rebellion was at last wiped out in blood and fire, the great Army of Bengal had almost ceased to exist. The hundred-year rule of "John Company" came to an end and Victoria became Empress of India. Some of the Company's

European regiments were absorbed into the forces of the Crown and the great sepoy army was thoroughly purged and reorganized. In the shape it then took it remained virtually unchanged throughout two World Wars, maintaining its proud traditions until the partition of India.

Of the officers and men who made up the Army during these years of Empire, there were few indeed who did not consider the world as belonging exclusively to the white man, and the heathen with whom they fought - yellow, black, or brown - as lesser beings without the law. Disasters there might be, but when all was over, a little more of the world-map was safely colored red. Not that the man in the ranks thought about that. He was only interested in the things professional soldiers have always been interested in - payday, beer, women, the next campaign, promotion, a pension. Not for him any lofty thoughts of dominion or world politics. When the tribes were up, the regiment marched, and that was that. Unfortunately the years of successful campaigning against the heathen, while stimulating, did little to advance the military art.

The Boer Wars

It was left to a little group of rough farmers - dour, devout, hymn-singing types - to administer a stinging blow to British complacency. The quarrel between Briton and Boer was of long standing. In the course of various wars, treaties, and alliances Britain in 1814 became master of the Dutch-settled Cape of Good Hope. The Boers (or farmers), a stubborn, proud, independent people, who had wrested their land at gun-point from the blacks, did not relish any government, let alone an English one. Many trekked north, with their ox-carts, herds, families, and slaves, and settled beyond the river Vaal. For years this river stood as the boundary between Anglo-Saxon and Hollander, but the Transvaal republic did not prosper. Rightly or wrongly, in 1877 the Queen's ministers decided that the tranquillity of South Africa demanded the annexation of the Transvaal. This was sullenly acquiesed to, but in 1880 incidents arising out of tax troubles led to open rebellion.

The opening engagement set a pattern for both Boer Wars. A small detachment of British – red coats and white helmets bright in the African sun – set out for Pretoria, band playing and baggage wagons stretching far across the veldt. An attempt by an

intercepting party of Boers to parley failed, and as the redcoats began to move in discipline formations from column to open order, the Boers opened fire. The fire was at once returned but the musketry of the regulars, while accurate enough to blast down hostile tribesmen with regular volleys, was not good enough to pick off concealed riflemen at long range. The Boers, on the other hand, were crack shots, natural-born marksmen to whom a miss might mean death from assegai or war club, or at least an empty dinner pot. In ten minutes all was over. One hundred fifty-five out of 259 men were down, dead or wounded. The rest, dazed by the suddenness of the attack, and the deadliness of the rifle fire, surrendered. The Boers admitted to two dead and five wounded. True, a quick-thinking sergeant's wife tore the colors off their poles and hid them under her skirt -but there was little glory in that. Regular troops had once more marched out against embattled farmers hiding behind shrubs and boulders - and had been bowled over like ten-pins. A lesson learned a century before had been forgotten.

An action at Laing's Nek also resulted in heavy casualties and a British retreat, while the engagement at Majuba Hill was an out-and-out disaster. Among contributing factors was the use of a mixed force, far too small, made up of separate detachments without any bond between them. This has always been a fruitful source of disaster, and conversely, proves how important pride of unit is. This time the Boers attacked, scaling the steep slopes of Majuba, while covered by an accurate fire from below, which picked off any man showing on the skyline. Once on the crest the deadly fire proved too much for the defenders. With most of their officers and NCOs down and over a third of the men killed and wounded, the remainder broke and fled down the mountainside. It was a black day in the history of the Army.

Panic is a strange phenomenon. Many of the men at Majuba were seasoned troops, some of them veterans of the Afghan War of 1879–80. Yet, when the breaking point came, they behaved like newly joined recruits. The stouter the bow, the greater the shock if it cracks, and it has often been commented on that a panic among veterans is worse than one among less-seasoned troops. Rigidity of training may have been a contributing factor—men still thought in terms of firing lines two deep—shoulder to shoulder. When this accustomed formation proved nothing but an invitation to slaughter they were at a loss. The company unit was at once too big and too small: too

big in that it was inflexible in this particular situation where platoons or squads trained to think and act as entities would have been more effective; too small because it lacked the physical and moral backing of the other companies of the regiment. Then, too, the uncanny accuracy of the Boer marksmanship had an unnerving impact. Death or wounds—personal, pinpointed, and inevitable—are more shattering to morale than the more random (though no less deadly) effect of machine gun fire or heavy bombardment.

Yet perhaps the fact that a momentary panic, among men exposed to a deadly fire—with their general and many of their officers dead, and one man in three a casualty—should have caused such a stir in England, is a compliment to the Army as a whole.

There were no panics in Egypt or the Sudan, though the latter campaign was against the tough and fanatical followers of the Mahdi—one of the numerous false Prophets who have risen over the centuries to stir up the Moslem world. Unlike the first Boer War, this was battle in the old familiar style, with the regiments in hollow square, and bayonets crossing sword and spear. Deficient as the tribesmen were in firearms and strategy, these engagements were not lacking in drama of "The Gatling's jammed and the Colonel's dead" sort.

The last great battle of colonial days was at Omdurman in the Sudan, in 1898. By this time the cards were even more heavily stacked against the native. The single-shot Martini had been replaced in 1888 by a magazine rifle, the bolt-action Lee-Metford, while the temperamental Gardners and Gatlings had been replaced by the Maxim. The campaign was under the direction of Kitchener, whose ruthless drive and efficiency, while making him few friends in the Army, assured the nation that there would be no muddling.

The results were a foregone conclusion. Even the once-despised Egyptian troops, stiffened by British training and officers, behaved well. The numerous attacks of the Dervishes, who are believed to have totaled 45,000 men, were carried out with fantastic bravery, but few got closer than a couple of hundred yards of the British lines. Nearly 10,000 bodies were counted after the battle.

But trouble was brewing once more in South Africa; and the ensuing war, while ending in a British victory, was to see the British Army suffer many defeats, and was to test the resources of the Empire.

As a leading world power, we in this country are today experiencing some of the obloquy which once was the portion of the British Empire. (Poetic justice,



Mounted Infantry-South Africa, 1900

as twisting the lion's tail was a favorite American pastime.) And never was the title of "Imperialistic bully" applied so frequently as during the South African War. Whatever the rights of the quarrel, here was a powerful nation "picking on" a tiny one. Volunteers from many nations fought with the Boers, while every British defeat—and there were many—was met with delighted cheers by the Continental press.

Unlike the brief encounters of the first Boer War, the second conflict found the Boers equipped with some modern artillery pieces (of greater range than the British field guns); one-pounder automatic weapons (pom-poms); and machine guns. The Boer troopers were mainly armed with efficient Mauser magazine rifles. The recent introduction of smokeless powder made the task of spotting hidden trenches and rifle pits even more difficult. Against such adversaries, the old close-order tactics were suicidal. For the first time, the real worth of the machine gun and magazine rifle was proved in combat.

The opening battles put the British soldier to a severe test. The leadership was about on the par with that which sent the redcoats marching up Breed's Hill, and the results were much the same. No troops in the world would have behaved better, but the sheets of fire from rifle and pom-pom were such as no men could face and live. Whole companies, sent against hidden trenches, were pinned down for hours under a broiling sun, where even a movement to raise a canteen brought a hail of lead. Here was none of the wild excitement which sent Wellington's stormers time after time into the terrible breech at Badajos. The descendants of the frenzied madmen who climbed that night over the bodies of their comrades, to claw with bare hands at the barriers of swordblades set in timber which studded that fatal rampart, were not lesser men. But there were no ramparts here, no crowds of yelling antagonists within bayonet thrust, no waving flags and rolling drums -only the dry veldt. No enemy to be seen, only the hiss and crack of the unerring bullet.

Small wonder that here and there, units refused to advance once more into certain destruction. None of their training had prepared them for anything like this. They felt let down (the man in the ranks at this date was more given to thinking than his counterpart of a half century before) by commanders who ordered them into impossible situations. At Magersfontein, for instance, the splendid Highland Brigade was marched in mass of quarter-column to within 400 yards of the hidden Boer trenches before being ordered to deploy. As they did, the faint glimmering of dawn exposed them to the massed fire of hundreds of riflemen, with disastrous results. Many troops, too, lost all their company officers, due to their mistaken gallantry in remaining on their feet in the firing line.

When the initial shock of the new warfare had worn off, and when some of the generals had realized the futility of sending men in close order across open ground against hidden riflemen, the British soldier settled down to the job with his customary adaptability. Advances in short rushes, in extended order, were often successful against even the heaviest fire, while the Boers, like many untrained volunteer forces, proved to be inordinately sensitive to flanking movements. The superior mobility of the Boers was met by mounting thousands of infantrymen (an unhappy experience for man and beast), and by raising many regiments of volunteer cavalry from the "horsey set" in England and from more professional horsemen: cowboys, sheepherders, hunters, mounted policemen, etc. throughout the Empire.

The Boer invasion of British territory (when the war began there were only about 5000 British troops in South Africa) was soon over; the besieged towns of Ladysmith, Kimberley, and Mafeking were relieved; and the capitals of the Transvaal and the Orange

Free State taken. The war then developed into a wide-spread guerrilla operation which assumed huge proportions. The total Boer forces were probably not more than 90,000 and it is doubtful if more than 40,000 were in arms at any one time. But incessant raids by well-led Boer commandos under such men as Botha, DcWet, and De La Rey tied up huge Empire forces, which finally amounted to some 250,000 men.

The Boers proved tricky and elusive antagonists, and there were many changes in the higher echelons of the British Army, as generals who could not adapt to the new conditions were sent home. There were also may setbacks; ambushes like that at Sanna's Post where a large supply wagon train was destroyed and prisoners taken; and defeats in the field such as Colenso, where a forward movement was driven back with 1100 casualties and the loss of ten guns. This last was typical of many such minor disasters. Two batteries were recklessly galloped up to within a few hundred yards of hidden trenches. Though the gunners stood to their pieces until nearly all their ammunition was gone, they could not beat down the fire of hundreds of concealed marksmen and many field pieces. Gun after gun fell silent as the crews dropped dead or wounded. Attempts to retire the pieces gave rise to another "Saving the Guns" epic. Cun teams dashed across the bullet-swept ground and succeeded in recovering two guns, at the cost of many lives - and six V.C.s.

The war was marked by savage fighting, and at the same time by surprisingly little bad feeling. Wounded of both sides were tenderly cared for, and there was much of the gentlemanly "Don't-cheerboys-the-poor-devils-are-dying" attitude, prevalent in that era. During the siege of Mafeking, for example, the daily bombardment was always halted on Sunday, the Boers believing strongly in keeping the Sabbath. The sports-loving English took the opportunity to organize polo, horse shows (before most of the horses went into the soup pot) cricket, etc. The Boer leader, however, sent in a message to the besieged that he disapproved of Sunday games, and they must cease under pain of Sunday bombardment! Prisoners were well treated - in fact after the fall of the Boer capitals, British prisoners were usually disarmed and released, there being nothing else to do with them. This undoubtedly gave rise to more surrendering than would have normally occurred. Small posts, surrounded and attacked by large commandos, with no hope of immediate relief, would occasionally raise the white flag - knowing that they would be back in action again within a short time.

By modern standards the war was a minor affair -British killed totaled less than 6000 - although close to three times as many died of fever and wounds. But it did much to shake up the Army and to bring to the fore a great number of promising officers, many of whom made their mark later in the First World War. As far as tactics went, the lessons learned brought no drastic changes. Like all wars, the South African War was a product of its particular time, technology, and location. Had it been fought a few years before, the slower fire, shorter range, and clouds of smoke of the old-type rifles; and the lack of accurate artillery and efficient automatic weapons, would have completely altered the complexion of the struggle. Likewise, a few years in the future would have seen aerial observation, field wireless, and armored cars, which also would have changed the picture. The solution of problems raised in the South African War certainly increased the efficiency of the Army; but the war in Flanders was to be of an entirely different nature. Waged in a flat muddy country; dotted with towns and villages, and cut by drainage canals and ditches - against a numerous and powerfully armed adversary, it posed questions of another sort; demanding other answers.

What the Boer War did do was emphasize the deadliness of modern weapons and the necessity for less vulnerable formations. Like all guerrilla-type wars, it showed the advantages of mobility, and with it the ability of an inferior force to strike with superior numbers at one given point. It also showed what good marksmanship could accomplish, and henceforth the British Army paid great attention to musketry. Perhaps most important of all, it impressed on the military the need for individual thought and initiative on the part of both NCOs and men. The Boers were individuals, and as such, thought and fought intelligently - each man his own leader, with a keen eye for cover and advantage of ground. He was, to a great extent, his own quartermaster, too. To the detriment of his cause, individualism was untempered by discipline - consequently when a burgher thought that supports were insufficient, or things were not going too well on the flanks, he quietly mounted his pony and trotted off-nor was there much his leaders could do to stop him. But the principle of individual initiative was sound and the British soldier of 1914 displayed considerably more of the above qualities than did the Regular of 1899-

Staff work and administration was on the whole efficient, and the nation could be proud of the transportation of thousands of men from all quarters of the globe, mountains of supplies, and vast numbers of horses. (Africa is particularly hard on horses—in the "sick" season mortality may run to 90 per cent. Overstrain and underfeeding killed thousands—the fourmonth advance on Pretoria alone "used up" over 15,000.) The war had also shown how inadequate in numbers the Regular Army was, and what could be accomplished with hastily trained volunteers.

The organization of the Army had undergone many changes prior to 1914. The first sweeping reform was under Edward Cardwell (Secretary of State for War under Gladstone from 1868–74). Length of service was again reduced with periods to be served partly with the Colors and the rest in the reserve. Pay was increased and conditions generally improved. Under his administration, and over great opposition, was begun the two-battalion system, in which those line regiments having only one battalion were paired and given a county designation and district for recruiting.

This was so that one battalion was always available for service overseas, while the other was stationed in the United Kingdom. Replacements in the battalion serving abroad were supplied from the home battalion. One battalion, at least, was always up to full strength and the replacements for overseas were already trained. Militia and volunteer battalions were available in case of emergencies, though these were not obligated to serve abroad. Thus the Gloucestershire Regiment had two regular battalions: The 1st was formerly the 28th; and the 2nd, the 61st Regiment of Foot. There were also the 3rd and 4th Battalions (Militia) and three Volunteer battalions.

There were more changes after the South African War. The Esher Committee in 1904 did away with the post of Commander-in-Chief; and the Army Council, the Committee of Imperial Defense, and the General Staff were created (this last a desperately needed reform). Under Viscount Richard Haldane's administration (1905–10) the militia was converted to a Special Reserve, with the duty of providing drafts for regular battalions. The Volunteers became the Territorial Force of fourteen divisions (1908).

Training was stepped-up, and the old "you-are-not-paid-to-think" concepts were drastically revised. It was still a conservative spit-and-polish Army in many respects, but some new ideas were creeping in. Communications were reorganized and eventually consolidated into the Royal Signal Corps. Indicative of the new thinking is this excerpt from training instructions:

"Modern war demands that individual intelligence should be on a high plane. Battlefields now cover such extensive areas that control by officers is very difficult, consequently noncommissioned officers and even private soldiers very often find themselves left to their own resources: and it is only by being accustomed in peace training to use their common sense and intelligence that they are likely to be equal to their duties in war."

The Army was still hampered by lack of equipment and facilities—even adequate ground for maneuvers being hard to find in a small island with a large population. The Navy received the major part of the defense budget: in 1910–11, Navy estimates were in excess of £40,000,000 while the Army estimates were some £27,000,000. In the huge Continental armies, the handling of large bodies of men was more or less routine. In contrast, in 1909, for the first time in its army history, the British mobilized a division (about 15,000 men) at full war strength.

The artillery had meanwhile been re-equipped with modern quick firing pieces—guns fitted with recoil mechanism, and using fixed ammunition, with charge and shell in one unit—like a rifle cartridge. A high rate of fire—up to 20 rounds per minute—could be obtained. Also, unlike the old-type guns which ran back in recoil when fired, the new weapons remained perfectly steady, allowing for more efficient aiming and permitting the use of a steel shield to protect the crews from shrapnel and rifle fire. The Lee-Metford rifle was replaced by the famous Short Magazine Lee-Enfield.

World War I

In the first years of the twentieth century, in a move which was to have dire consequences, the policy which for years had kept England out of European alliances, and, by her control of the seas, had made her virtually the keeper of the world's peace, was abandoned. The rise of Germany as a great trade rival, the growing antagonism between the two nations, and the threat of the rapidly expanding German Navy finally brought Britain into the Franco-Russian camp. This was, for England and the Empire, a fatal step. Her involvement in the inevitable continental war was to topple her from her place as the world's leading financial power; ruin her trade; drain away her vast overseas holdings and leave her saddled with debt; and last but not least, demand a staggering toll of dead and maimed. It was to adversely effect every living Britisher, and millions yet unborn, and to lay the seeds for the final dissolution of the major

portion of the Commonwealth after World War II.

Its immediate effect was to involve the peacetime Army in plans for active participation on the Continent. Obviously, it had never been designed for a war involving millions — nor could the efforts of a few farsighted men prepare the country (and the politicians) to accept the need for conscription. The word was anathema to the public, and would have been sure death to any political party advocating it. But while the Continental powers could number their troops in the millions, the long-term enlistment system had produced a professional soldier far superior in quality, and the British Army at the outbreak of the war was undoubtedly the finest in the world.

It was also very small, less than a quarter of a million men. The Kaiser had referred to it as the "contemptible little army" and Bismarck had once said, when questioned about a possible invasion by a British Army that he would have it arrested and locked up. But, while woefully deficient in machine guns (two to a battalion), and with reserve ammunition for the field guns so low that they were shortly rationed to five or six rounds per gun per day, the fire of the well-trained riflemen gave some Germans the impression that the British were using automatic weapons. Wrote one "Old Contemptible": "The three of us had been marksmen all through our soldiering, each of us could get off 25 aimed rounds a minute . . . those that were out in front started to run, but we bowled them over like rabbits . . . against we had expended our magazines which held ten rounds there wasn't a live enemy to be seen!" And again: "They came at us in great masses. It was like shooting rabbits, only as fast as you shot one lot down another lot took their place. . . ."

But the slaughter was not all one-sided. The German artillery, much of it of large calibre, caused heavy casualties, as did their concentrations of machine-gun fire. In the blood and mud of the first winter's fighting, the old professional army melted away-to be replaced by Territorials, and later by the first men of the new "Kitchener's" armies. This great organizer, Earl Kitchener of Khartoum, who had reluctantly taken the post of Secretary of State for War, was one of the few who accurately predicted the size and scope of the conflict. His dire prophecies to the Cabinet that the Empire must prepare for a war of several years' duration, and be ready to raise armies numbering millions, were hardly credited at a time when troops in England were fretting lest the war be over before they saw action.

So it proved, however, and men from the British Isles and from all parts of the Empire poured in by hundreds of thousands; some to fight and die in odd corners of the earth—in East Africa, Gallipoli, Salonika, Iraq—but the vast majority to be fed endlessly into the hopeless misery of the Flanders trenches. The old Army was gone but the new men carried on in the great tradition of the old regiments. Thousands passed through their ranks and new battalions were formed in large numbers.

The huge casualty lists (on the opening day of the Somme offensive, British losses amounted to almost 60,000) had finally forced the adoption of a compulsory Service Law. The total permanent wastage of troops from the United Kingdom alone was to amount to over 1,890,000, including over 500,000 dead. The total mobilized in the Empire was 8,904,467. Of these 908,371 died, and 2,090,212 were wounded.

The old line regiments went down in glory, but the succeeding thousands of volunteers and conscripts nobly upheld the honor of their corps. Year after year they lived and battled in the muck, dying in thousands for some few acres of battered slime or the pulverized, gas-drenched rubble that had been a village. Yet through all the accounts and letters, histories and diaries, emerges a picture of men who never gave up - never lost their wry sense of humor -never let the feeling of utter futility and frustration, which must have gripped even the most unimaginative, get them down. Few at the last could have had any illusions about their commanders - good, honest, God-fearing gentlemen, with no more wit nor imagination than to send men year after year stumbling over muddy ground against massed machine guns and barbed wire.

No wonder the politicians began to question the judgment of the professional men of war. Sickening casualty lists, and nothing to show except occasionally a few hundred yards of trench: yet always the same optimism; the same beloved cavalry (Sir Douglas Haig, the C-in-C, was a cavalryman) massed behind the front waiting to exploit, with dashing charges, the "breakthroughs" that never came. Attempts to find a way round the long wall of sand bags and wire which stretched from the Alps to the North Sea met little favor in the headquarters on the Western Front. Daring and imaginative exploits, like the badly bungled landing at Gallipoli - which came so close to success, and which, had it succeeded, would have completely altered the world we live in today - were condemned as wasteful side-shows. Nothing would do but that the armies should assault the Western barriers grown now to deep aggregations of trenches, concrete pillboxes, dugouts, and wire.

The gun had captured what little imagination the commanders had. More German wire meant more guns, and more shells per gun. Artillerymen in peacetime had thought an allowance of ten rounds per gun per day might be sufficient. The B.E.F. went to war with some 400 field pieces. During the bloody struggle for Passchendaele, 3000 British guns, many of them heavy, fired 4,250,000 shells! The great Kitchener thought that two machine guns per battalion was sufficient and any more than four a luxury. In 1918 each battalion had 36.

No matter that the great bombardments cratered the ground so as to seriously hamper advancing infantrymen. Or that it was proved time and again, that, no matter how fierce the bombardment, sufficient machine gunners, sheltered in deep bombproofs, would survive to mow down the attacking waves. Sir Winston Churchill in his *The World Crisis* cites the example of the British 8th Division in the Somme offensive. Its 8500 bayonets went forward in waves, after a prolonged bombardment, against trenches held by the German 180th Infantry Regiment — some 1800 men. In just over two hours the division lost 5492 officers and men. German loss, 281! The few yards of trench bought by all this blood was back in German hands by nightfall.

On the credit side, official German accounts make it clear that the impact of the British bombardments on German morale was very great—one staff officer writing that "The Somme was the muddy grave of the German field army," and another admitting that "In the Somme fighting in 1916 there was a spirit of heroism which was never again found in the division (27th Würtemberg), however conspicuous its fighting power remained until the end of the war."

Throughout the war, the military authorities at the War Office seem to have proved bitter foes of innovation. To give them their due, however, new weapons (adopted with initial reluctance) once they had prove their worth were turned out in mountains, and the rank and file could at least be sure that their military wants were being amply supplied.

The so-called "tank," for instance, a name applied to the experimental models for security reasons, was initially dropped by the War Office "experts" and only developed, through the personal energy and foresight of Winston Churchill, by the Navy! The Ministry of Munitions, then under the fiery Lloyd George, finally took over their further development. At the official trials before ministers and high brass the first machine, HMS Centipede behaved beyond expectations. Too well, because before it could be produced in sufficient numbers for a decisive result,

the unimaginative Haig demanded the few already produced; and as Lloyd George afterward wrote: "The great secret was sold for the battered ruin of a little hamlet on the Somme, which was not worth capturing." (The German High Command erred in the same way by throwing away the far more devastating surprise of poison gas in a small local attack—so lack of imagination was not confined to the British High Command.)

A brilliant attack at Cambrai, with tanks used in great numbers, and with no preliminary bombardment, achieved an astonishing success. The whole German trench system was penetrated on a front of six miles, 10,000 prisoners taken, with 200 guns, for a British loss of some 1500 men. For a moment the curtain was raised for a look into the future at a new kind of warfare. But the success was too astounding. The High Command was disbelieving, and therefore, unprepared. The reserves which should have poured through were lacking, and a powerful counterattack ten days later canceled the gains.

So the trench war ground on. Fighting such as no man had ever seen—day after day, month after month—so many days in the trenches, so many "resting" behind the lines. Always death and the smell of death. And always, even in quiet sectors, the steady drain of casualties—the knowledge that sooner or later—tomorrow, or next month, or next year, wounds or death were almost a certainty. The citizen-soldier of the First World War—at least those involved in trench warfare on the Western Front—faced physical and mental problems hitherto unknown to warfare.

Necessarily, the quality of the troops, (and this was true of all the major powers) fell off as the war progressed. Drafts were made up of conscripts (some most unwilling) and of soldiers returning to duty after recovering from wounds. Units varied in fighting value, reflecting the tone and the energy of the battalion officers and senior NCOs. There were good battalions and bad battalions. Good ones (the first and second battalions, where the regimental traditions were strongest, and which generally had the most experienced men, were usually the best) kept their reputation, although constantly being drained and refilled. Such battalions had a name for efficiency. They always established fire and patrol supremacy in No Man's Land after taking over a section of the line; kept their wire mended, and entrenchments clean and in good repair; and could be relied on to take and hold a position if it was humanly possible. A battalion with efficient officers and good morale (the two usually went together) was found to be more immune to the lesser ills of trench life. On the

other hand, it often received more than its share of tough assignments.

An increasingly large part was played by troops from the Dominions: Canadians, Australians, New Zealanders, and South Africans. They won a reputation for initiative and aggressiveness – frontier-type qualities, invaluable in a fighter – which in general they possessed to a greater degree than the troops from the United Kingdom. Their studied lack of discipline at first shocked and exasperated the Regulars, but their fighting spirit and ability soon dispelled any doubts as to their dash and courage. Some 425,000 Canadians and 325,000 Australians alone served overseas, and their losses were very high.

The war brought forth an entirely new breed of fighting man-warriors who battled far above the earth in frail contraptions of wood, cloth, and metal. The "Knights of the Air," as they were hailed by the press, knew little of the blood and muck of the trenches. Theirs was a cleaner fight - and often a quicker, cleaner death. In the beginning there was something chivalrous about the air war, with its single combats, courtesies, and camaraderie - but before the conflict was over, the night skies over the major cities were alive with searchlights and bursting shells, while the glare of burning buildings and the crash of explosions gave a slight foretaste of things to come. In this new medium the British fighting man established a splendid reputation, and laid the foundations for the great air fleets which were to play such an important part in the next struggle.

The victory in 1918 saw Britain with a field army of over seventy divisions. The liquidation of this great force was at once got under way and by the middle of 1920 more than 163,000 officers and over 3,500,000 men had been demobilized. The postwar "economies," or so the politicians like to call them, also cut deep into the Regular Army. The Services were sliced to the bone, mountains of weapons and munitions were junked, and warships went to the scrapyard.

The Empire at Bay

Having reduced the Services below the danger point, succeeding governments proceeded to keep them there, blithely ignoring all danger signals from abroad. While Germany and other powers were rearming, the British public blindly followed a deluded man with an umbrella in a death-march to Munich. Finally, £1,500,000,000 in armaments, spread over five years, gave the country a start in regaining her lost position

in the armament's race, but when, for a second time in a quarter of a century, the Teutonic tide overflowed its banks, the country was far from prepared.

The Territorial Army of fourteen divisions had been accorded equal standards and training facilities as the Regular Army (1937) and early in 1939 its strength was doubled. Service in the Regulars was for twelve years or shorter terms, with service in the Reserve to total twelve years. In May 1939 the government took the unprecedented step of introducing peacetime conscription. This Military Training Act required young men twenty to twenty-one years of age to take a special six-month training course. On the outbreak of war (September 3, 1939) this Act was superseded by the National Service Act — extending service to all men between eighteen and forty-one (raised in 1941 to fifty-one). The Territorials were at the same time merged with the Regular Army.

It is a commentary on civilian "thinking" in a true democracy that the Regular Army in July 1939 was smaller (237,000 to 247,000) than in July 1914. Nor was it, in comparison with the Germans, as well equipped. The Spitfire was a superb machine—superior in speed and maneuverability to the Messerschmitt 109, and the Hurricane was almost as good. But there was nothing comparable to the Junkers 87 dive bomber for close infantry support. British tanks were few and poorly armed; and while the 25-pounder gun-howitzer was a splendid weapon, there was nothing to match the versatile 88-mm.

The soldiers of the B.E.F. of 1939-40 were every bit as good, and possibly even better, than those of 1914. Physically they were harder—modern battle training being tougher and more scientific than anything in the old days. A mechanically minded generation also provided men more mentally alert and better fitted to cope with the technicalities of modern war. The behavior of the troops under particularly trying circumstances in the Battle of France and the subsequent miraculous evacuation at Dunkirk, proved that they had lost none of the steady valor for which their forbears had been famous.

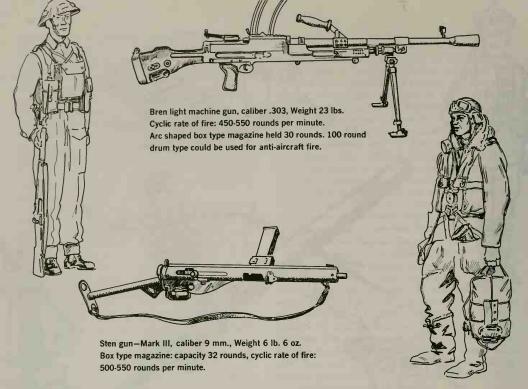
Every modern war produces favorite heroes, those who by a combination of spectacular feats of arms, concentrated interest by press and public, and decisive results win world-wide acclaim. Such were the fighter pilots of the R.A.F. The moral ascendancy which these magnificent airmen gained over the Luftwaffe was to remain a major factor throughout the war, and the call over German inter-coms of "Achtung, Schpitfeuer" broke up many a Nazi formation. The proud traditions of the old Royal Flying Corps and the R.A.F. of World War I were carried on by



the tens of thousands of pilots, bombardiers, navigators, and crewmen who manned the great fleets of planes which finally made up the mighty R.A.F. Its operations were global but it will probably be best remembered for the 1,104,000-odd tons of bombs which it dropped on the Continent (exclusive of tactical missions), most of which fell on targets in Germany.

Besides the dogged courage which the world had come to expect of the British fighting man, the war emphasized once more the amazing British faculty for improvisation, inventiveness, and unconventional approach. The development of the commando units, and the perfection of Combined Operations tactics is one example, as is the daring behind-the-lines campaign of Wingate's Chindits, and the work of the celebrated Desert Raiders.

The war brought more than its share of military disasters, both tactical and strategic. The worst was the blundering campaign in Malaya, ending in the



In World War II the tunic and puttees of the earlier war gave way to the comfortable battle-dress and canvas leggings. The Enfield remained much the same but with a shorter bayonet. The standard automatic weapon was the Bren—which has been called one of the finest light machine guns ever developed.

Mass-produced, the Sten gun was designed to take

fall of Singapore. The troops involved behaved most gallantly; but they were reaping the harvest of a series of mistakes, each one serious enough and, taken together, sufficient to spell defeat. The first and greatest was the paucity of air power. This stemmed directly from the general unpreparedness of the prewar years, but it was compounded by the concept (by 1941 it was more of a hope than a fact) that the Empire's defense rested on the Royal Navy. Singapore itself, a teeming, polyglot metropolis, was completely unfitted to withstand siege, or even sustained aerial bombardment. The great naval dockyards were heavily defended from an attack by sea, protected by monster 18" guns—but at the time the war broke

captured enemy ammunition. It was sturdy, had few parts, and needed little attention. Besides use by British units, thousands were air-dropped to partisans on the continent.

The huge concentration on the effort in the air war made the helmeted flier, in parachute harness and Mae West, a familiar figure.

out it should have been obvious that no such attack would be made.

The Navy, which had done so much to pioneer the carrier, seems, in the pre-war years, to have discounted the plane and its probable effect on military operations. The Army did the same; while coordination between them and the R.A.F.—which was far too short of planes to be able to afford local superiority anywhere but over Britain itself—was in a very rudimentary state.

Consequently, without adequate air cover, the Navy, most of which was in the Atlantic or the Mediterranean, could not stop a landing; the Army was not adequate to check an invasion which, theoretically, should never have occurred; and in falling back under constant air attack, it lost the airfields from which the tardy reinforcements of planes might have stemmed the tide. (Some were captured, uncrated, when Singapore finally fell.)

As far as the military campaign went, the chief mistake was in completely underestimating the Japanese and refusing to recognize the jungle as a possible battle area. The powers-that-be had decided that no troops could operate in the Malayan jungle—and that was that. Consequently the Japanese infiltration through terrain which had been judged impenetrable came as a complete surprise.

The combination of unorthodox tactics (the Japanese had given much time and thought to training and equipping their troops for this kind of warfare) and air superiority did the rest. Unfortunately, the press had for a number of years referred to Singapore as "an impregnable fortress," "a bastion of Empire," and so on. (Even Churchill expressed surprise and concern when he learned that there were no defenses on the landward side.) When it fell, therefore—as was inevitable—the shock was considerable. Apart from the surrender of some 64,000 troops, half of them U.K. or Australian—the loss of prestige was tremendous and the Services came in for much criticism.

Actually the combat units (many of those captured were base troops or technicians—who usually far outnumber the bayonets on the line) did all that men could do. The campaign, as were those in Norway and Greece, was lost before it was begun.

Adaptability, however, has always been an Anglo-Saxon characteristic and the troops who ultimately won back Burma and Malaya were as jungle-wise as the Nipponese – and this time the air belonged to them.

A second disaster was the decision - more political than military - to send a force to aid the Greeks. The advance in the Western desert was halted at Tobruk. A skeleton force was left to consolidate the gains, and the majority of the victorious troops shipped off across the Aegean. There can be no doubt that much of the blame for this foray into the Balkans can be laid at Mr. Churchill's door. His boundless energy and enthusiasm carried him into the realm of strategy (where he definitely did not belong) and in this case the victories in Africa would appear to have gone to his head. Italian East Africa had been taken, with some 200,000 prisoners, while the Italian invasion of Egypt had ended in utter rout. Lord Wavell's commander in the Western Desert, General Sir Richard O'Connor, never using more than two divisions at a time, had chivvied the Italians out of Egypt and across Cyrenaica, taking 130,000 prisoners, 400 tanks, and 1300 guns. British casualties were under 2000!

The Greek adventure was to cost the British dear, for while their armor, artillery, and equipment were loading for Greece, Rommel and a German mechanized force were unloading in Tripoli. Within a short time he had brushed aside the weak forces left to guard Cyrenaica, besieged Tobruk, and pushed up to the Egyptian frontier. It is highly likely that had Greece been ignored, and had Wavell's divisions been reinforced and allowed to push on, all Italian territory in North Africa would have fallen into British hands. In that case, the two years of bitter fighting in the Western Desert, culminating in El Alamein and the drive to Tunis (perhaps even the Allied landing in French North Africa) would not have been necessary. It is even possible that the lukewarm Italians, subjected to close-range aerial assault from their erstwhile colonies, might have been driven to sue for peace.

Of the 57,000 British soldiers who landed in Greece, some 30,000 finally reached Egypt. All their tanks, guns, and vehicles were lost, and the Navy suffered grave losses in ships and men. Nor did the costly expedition help the Greeks, while British prestige suffered accordingly.

In October 1942, Rommel was hammering at the doors of Egypt—while in other theaters the Russians were desperately hanging on at Stalingrad, and in the jungles of Guadalcanal equally desperate U. S. Marines were holding off fanatical Japanese attacks. It had been a bad year for the Allied cause. A British defeat, with the loss of Egypt, the Canal, and the whole Near East would have been a devastating blow.

The battle and the victory at El Alamein, came at an opportune time. The great bombardment which heralded the British advance; six miles of guns, less than 70 feet apart, all splitting the night at once; pipers leading the bayonets through the minefields; armor and vehicles sweeping forward; all combined to fulfill the popular idea of what a battle should be like.

Above all there was the knowledge that for once everything had gone well. There was at last a sufficiency of the right equipment: six-pounder anti-tank guns which would stop the German armor; Sherman tanks, with 75-mm guns in fully traversing turrets; enough planes; enough gasoline; enough guns. The men of the Eighth Army had so often failed for lack of these things, and for the lack of the ultimate de-

gree of coordination between tanks, planes, guns, and men. Now they had the materiel, and in General Sir Bernard Montgomery, a cool and skillful leader to direct the whole. Soon the steady advance was rolling past names made familiar by two years of desert warfare—Bardia, Sollum, Tobruk, Benghazi, El Agheila (high water mark of Wavell's advance), then Tripoli itself—1200 miles—and the end in sight at last. It was a very fine Army indeed which finally linked up with the Allies advancing from the West, one of the finest a British general ever led—tried in defeat and victory—confident and competent, with a morale higher than any such force since Wellington led his victorious Peninsulars over the Pyrenees into France.

The British armies—and this includes those of the Commonwealth: Australians, Canadians, New Zealanders, South Africans, Indians, and Negroes—fought bitter and continuous battles in Italy, in the Far East, in France, the Lowlands, and Germany itself. There was grim fighting at Cassino and at Caen, and the stand of the airborne "Red Devils" at Arnhem will be long remembered. The great breakthrough into North Germany gave final victory, and British troops, who had once watchfully guarded the far side of the English Channel, refueled their vehicles on the shores of the Baltic.

The Royal Navy

While the ultimate decision in every war rests finally on the rifle and bayonet of the infantryman, the true strength of a global power lies in the control of the sea. It is true today, even in this age of air fleets and long-range missiles; it was truer still when traders of the British Isles set out to found a mercantile empire. Trade and the flag went hand-in-hand in those early days, when each merchantman carried her own means of protection—and aggression. But war and trade finally parted company, and the fighting Navy became a thing apart.

Because it evolved from a merchant Navy, manned by bold seamen whose business took them to the far seas, the Royal fleets had always a tradition of seamanship and nautical skill. To this was added the courage and discipline of trained fighting crews—men who could coolly work their guns while the round shot crashed and the splinters flew. Such a combination spelled victory far more often than defeat, and so the tradition grew. First it was the Spaniards (they had never forgotten Sir Francis Drake, and the British seamen knew they could beat them



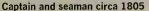
Rear Admiral and Marine circa 1750

any time). Next, the Dutch and then the French—always the French—sometimes with the Spaniards for good measure thrown in. But with a large seafaring population to draw on, and leaders like Blake and Hawke, Rodney and Hood and the great Nelson, there was little the mariners of England could not do.

At times complacency bred defeat, and men forgot that the sole purpose of a warship is to provide a floating platform from which her weapons can destroy the enemy. It took the War of 1812 to prove that the Anglo-Saxons with the stouter ships and the better gunnery could win every time. But the spirit of the seamen was there; keeping the guns going while shipmates were swept away by the dozen, when the sanded decks were slippery with blood and the air full of the screams of the badly wounded and the whizz of the deadly splinters.

Rough as were the methods of the press gangs and brutal as was the treatment of the men, a good captain with the aid of capable officers and the bosun's cane could speedily turn his motley collection of pressed men, jail birds, volunteers, and veterans into a highly trained fighting machine. Amazingly enough, such men—many of them forcibly dragged from the arms of their families; all of them miserably fed, and housed like herrings in a cask—quickly developed a pride in themselves and their ships which would take









Seaman and petty officer 1960

them through battle, tempest, and the monotonous hardships of months of blockade duty.

With the coming of the steam navy, the mid-nineteenth century brought better conditions and less harsh discipline - gone were the press gang and the "cat" - although "salt horse" and biscuit were still the sailor's fare. The growing complexities of the new ironclads produced a different breed of seamen - better educated, and able to cope with the gadgetry of gun mechanisms, torpedo tubes, flash boilers, and turbines. But the spirit of the Service remained the same - the tradition of discipline to be maintained in the face of any and all eventualities. At Jutland the battlecruiser Queen Mary was struck near "Q" turret by two salvos - a heavy explosion followed, and she rolled over and sank. The narrative of a petty officer, one of the seventeen survivors, relates that, as the ship began to heel, those alive in his turret were ordered out. "P.O. Stares was the last I saw coming up from the working chamber and I asked whether he had passed the order to the magazine and shell room, and he told me it was no use, as the water was right up the trunk leading from the shell-room, so the bottom of the ship must have been out of her. Then I said, 'Why didn't you come up?' He simply said, "There was no order to leave the turret."

By virtue of necessity, a ship's company is a more closely knit group than a similar military organization. There is a sink-or-swim-together feeling about even the largest crew, and the knowledge that upon the action of each man may depend the safety of the ship and the lives of his shipmates. Officers are closer, physically at least, to their men, than in other services, and the impact of the officer's personality, and knowledgeability, is correspondingly increased. Shipboard morale, then, is primarily a reflection of the ship's officers and petty officers - adding to or detracting from the underlying Service morale as the case may be. A slack ship is, obviously, an inefficient, "sad" ship, while a taut ship, we are told, is a happy one. On the other hand, it is possible to demand too taut a ship, and for discipline to defeat its own purpose. (An extreme example was a ship known as the Bounty commanded by an able navigator named Bligh.)

When the happy medium is hit, the ship will function as smoothly and effortlessly as a chronometer. Her morale will be high, her engineering and gunnery departments models of efficiency, and if it should be her destiny to join so many other gallant ships on the ocean floor, then her crew will fight her to the last, and (those that are left) give her "three times three" as she takes the last plunge. That has been the fate of a great many warships that have flown the British flag. "If Blood be the price of Admiralty," wrote Kipling, "Lord God, we ha' paid in full." The seamen of the Royal Navy have more than once gone down before the guns of better armed and better armored vessels. For those in power have not always supplied the British tar with the fastest, most heavily gunned, and most invulnerable ships affoat.

Impressive as was British naval power in 1914, the test of battle showed some dangerous weaknesses. Magazines were poorly protected against shell fire and flash-backs from the handling rooms under the turrets. (Four great ships were lost at Jutland when their magazines exploded, but while several German ships had powder fires which gutted turrets, no ships were lost from magazine explosions.) Compartmentation was poor in comparison with German vessels, as was range-finding and fire-control equipment. Lastly, some British armor-piercing shells had a tendency to break up before penetrating. With the exception of the five Queen Elizabeths, with their high speed, heavy armor and 15" guns, there is no question that, ship for ship, the Germans were superior. This was also true in World War II. The new King George V class was no match for the Bismarck or Tirpitz, and the Nazi cruisers of the Hipper class were more powerful than any cruisers in the Royal Navy.

But if the ships have not always been up to par, there has never been the slightest criticism of the conduct of the personnel. There is more to a fighting service than mere gadgetry, and the Royal Navy, while it no longer rules the waves, can still lay claim to a reputation for cool courage, efficiency, and seamanship second to none.

It may not be necessary for a man to "have the sea in his blood" to set the sights on a gun, or read an oil pressure gauge. But to calmly and steadily perform these duties under the most adverse conditions, amid the scream of splinters, the crash of explosions, and the roar of escaping steam takes self-discipline of the highest order. The British sailor in question, Royal Navy or Merchant Marine, though he may come from a mining town or a farm, has imbibed some of the tradition of the service almost from the time he was weaned. His whole boyhood history and literature is full of it, and if, when the going gets tough, he remembers a bar of "Heart of Oak," a line from "Drake's Drum"; that visit to the Victory or the photograph of Uncle Charley with H.M.S. Hood on his cap ribbon, the chances are that a good seaman is, for a moment or two at least, an even better seaman.

The Navy in the First World War had been handled

with caution, at least as far as the battle fleet was concerned. This policy, sound as it may have been, drew some criticism in after years. It was felt that the "Nelson touch" had been lost and that the Navy's prestige had suffered in consequence. In the Second World War, while it fought no great actions like Jutland, major units were unhesitatingly committed, and the aggressive handling of cruisers and lighter units won universal admiration.

Today's Forces

Today the armed forces of the Crown are once again professionals; very few in number, but well equipped with the most up-to-date weapons, including a nuclear deterrent (at present this would be delivered by bomber, but four Polaris submarines are on the way).

In April 1964 the active strengths of the three services were: Royal Navy, 103,000; Army, 170,900; and the R.A.F., 130,400.

Conscription has been done away with and most of the personnel are long-term-enlistment men. Thus of the R.A.F. enlisted personnel in 1964—only 600 were enlisted for less than five years; some 12,000 for five to eight years and more than 100,000 for nine years and over. The Naval ratings first engagement is for nine years. Pensionable service is twenty-two years.

The once-mighty Royal Navy now (1964) consists of four carriers, two commando carriers; five cruisers; six guided missile destroyers; fifty-two assorted destroyers and frigates; one nuclear and thirty-six other submarines plus some mine-sweepers and a few landing craft. As an example of the great rise in wages and cost and the fantastically increased expense of the modern warship, the estimates for 1963–64 were £439.951,600. Estimates for 1914–15 when the fleet numbered twenty-four superdreadnoughts, nine battlecruisers, forty pre-dreadnought battleships, fiftysix heavy cruisers, forty-four light cruisers, over three hundred destroyers and torpedo boats, and seventy-eight submarines plus sloops, gunboats, etc. were only £53,573,261.

The Army has recently brought to a successful conclusion a long and difficult anti-guerrilla war in Malaya, and troops are, or were recently, engaged in Southern Arabia, East Africa, British Guiana, and Borneo. These actions, plus NATO commitments, have stretched the thin red line very thin indeed. Recruiting is slow and the Army is several thousand



short of authorized strength. Even with the aid of Gurkha mercenaries, several battalions of whom are always in the British service, Britain's position as titular leader of the Commonwealth may eventually make necessary some form of conscription.

The war which saw the island kingdom's greatest military effort also saw her finish as a first-rate power. It was as if the old saying had been twisted, and England had won every battle except the last. That battle she could not win. Certain facts are inescapable and a small nation, without resources, and with dwindling foreign trade cannot compete with powers

with huge populations, and great land masses containing vast natural wealth. The factors which, in their particular time and place, made the Empire of Victoria's day possible, have changed. The industrial riches which once supported the great fleets are no more—the Colonies and Dominions have gone their separate ways. That the subject nations went peacefully—many to remain within the framework of the Commonwealth—is as much a tribute to the soldiers and sailors, past and present, who won and held the old Empire, as it is to the good faith, and good sense of the British people themselves.



THE JAPANESE

PECULATION as to the fighting qualities of the warriors of Dai Nippon has intrigued the West for over a century. The meteoric rise and fall (temporary, at least) of an empire of Asiatics, has had a tremendous effect on world politics. The number of nationalities who, in the last seventy years, have crossed swords with the soldiers of Japan is an impressive one. The list includes Russians, Americans, Britishers, Frenchmen, Dutchmen, Germans, China-

men, Indians of many races, Malays, Koreans, Filipinos, and many more. The potential of so dynamic a race, penned in a tiny island kingdom, is so tremendous that it is inevitable that at some future date swords will be crossed again. Whether at that time the Japanese soldier will prove the equal of his fathers is an interesting, and perhaps a vital, question.

The tempo of history's march tends to quicken. Empires are no longer measured in millennia or centuries but in decades. The emergence, however, of a people (isolated for centuries from contact with Western civilization) from a semi-barbaric feudalism into a world power, within the short space of fifty years, was a phenomenon the like of which the world had never seen. Commodore Matthew C. Perry found a nation whose warriors still fought in armor; in which sword, spear, and bow were the national weapons; and where the most modern arms were a few ancient cannon and matchlock muskets. Forty years later, Japanese warships at the Yalu River fought in the world's first major engagement between modern iron-clads, while Japanese transports landed an army equipped and trained in the most approved European manner.

No Westerner can hope to fathom the Oriental mind, and attempts by Japanese to express the underlying motives of their warrior-creed usually end in involved and confusing reference to ancestors, divine winds, and cherry blossoms. The contradictory behavior of the modern Japanese soldier has also puzzled many Occidentals. Perhaps if those who try vainly to reconcile the lofty ideals of Bushido, the Way of the Knight, with death marches, beheadings, torture, treachery, and rape were to turn back to the West's own feudal period, they might find an answer. The outward change in Japan was gigantic - the inner change-little, or none at all. The customs, the economy, the very appearance of the country were altered beyond recognition, but the character of a people cannot undergo transformation in so short a time. The Japanese, despite the trappings of modern Western civilization, remained at heart as superstitious, as crafty, as savage, as amoral as any European of medieval times. And that the sword-wielding Samurai should delight in verse, painting, the art of landscaping, and the formal and exquisite tea ceremony should surprise no one familiar with the accomplishments of some of the armor-clad gentry of the later Middle

To attempt to explain the Japanese soldier it is necessary to understand a little of the islanders' history and social structure. It should be remarked in passing that the Japanese are reasonably pure racially (there have been no great admixtures in the last thousand years), and that, unlike any other great nation, had never (until 1945) been defeated or successfully invaded, from earliest recorded times. The early history (part legendary) of the country is filled with the usual tales of war, treachery, noble deeds, and bloodshed. The idea of a single ruler, an Emperor or Mikado, goes back far beyond historical days. Folklore (granted official sanction in recent



Probable appearance of warrior of sixth or seventh century

times, with the view of giving continuity to Japanese history and an unbroken line of descent to the Son of Heaven) makes one Jimmu the first ruler of Japan, and puts the date of his accession as February 11, 660 B.C. This is equivalent to fixing an exact date for the day that the she-wolf found Romulus and Remus, and can be ignored. What is important is that it helped establish in the Japanese mind the uninterrupted succession of their Emperors, of which Hirohito is the 124th.

There were the usual proportions of weak rulers and strong men-one of the latter being Sakanoue Tamuramaro (circa A.D. 800) renowned for his successes against the primitive and hairy Ainus of the North. The Mikado of his day gave him the title of Sei-i-tai-Shogun or Barbarian-Subduing-Generalissimo. Before long, a unique dual authority came into being and persisted for some thousand years. This peculiar institution had the effect of relegating the Imperial rulers to the role of something akin to high priests, while the actual power lay in the hands of the Shogun - which office itself was generally hereditary. This separation of the titular and actual power served to preserve the Mikado from all the obloquy inherent in the business of governing. It left him, the personification of the Son of Heaven, the homage of the people. In their eyes he could (from sheer inability to do anything) do no wrong. To the Shōgun—the power, the glory, the cheers, the catcalls, and the rotten eggs; to the Emperor—a guard of the Shōgun's troops, a pension, peace, and deification. It was a comfortable arrangement.

The Samurai Code

The Shōgun Yoritomo (died 1199) regularized this system and set up a military-type government, the Bakafu, in which the warrior caste, the Samurai, controlled the administration and the social life of the country. As in any feudal state, there were constant struggles for power among the great nobles and barons, while the common people were reduced to serfdom. The Diamyos (lords) kept great state, and surrounded themselves with retainers. These Samurai were supported by their liege lord, their pay being usually in kind (mostly rice); which, in turn, the Diamyo's stewards squeezed from his serfs and tenants. These Samurai, who of all the people had the right to wear two swords, were the warrior heroes of old Japan. Their allegiance was to their lord, and loyalty was their creed. Japanese folk tales were full of stories of the bravery and devotion of these retainers, just as today, Japanese movies recount their deeds in hundreds of Nipponese "horse operas."

The story of the Forty-seven Ronin is Japan's most popular romance, a 250-year-old tale which every youngster knows by heart. It is typically Japanese and gives some insight into the heroes worshiped by the

children of Dai Nippon.

A nobleman was deliberately insulted while in the Shōgun's palace, and, forgetting himself in the heat of the moment, drew his sword. For this breach of etiquette he was required to commit hara-kiri on the spot. His estates were forfeited, his family dispersed, and his company of Forty-seven retainers disbanded. The name for those Samurai who, for one reason or another, found themselves without lord, roof, or keep was Ronin (wave men) and, like the tall, two-gun rider seeking adventure in the American West, they were natural subjects for the story teller. The Fortyseven out-of-work retainers were duty-bound by the warrior's code to avenge their lord's death, although under civil law to do so meant the death penalty. After many adventures, the doughty Forty-seven managed to surprise their victim, killed him and cut off his head. They then paraded openly to their lord's grave where, to the plaudits of the crowd, they deposited the head and then ceremoniously disemboweled themselves.

The common people, the "Heimin," far below the Samurai on the social scale, were divided into three main classes - husbandmen, artisans, and merchants - in the order of their importance. A wealthy farmer might even wear a sword (one) on his own land, and, as the artisan class included the artists as well as the mechanics, in art-loving Japan some of this group might win some slight social recognition. But the merchant and trader were beneath contempt, although often able to acquire considerable fortunes. The commoners as a whole were kept in complete subservience, with about the same relationship to the warrior and noble classes as a Saxon churl had to a Norman knight in the time of Henry I. In both cases, the knightly class was above the law, and in Japan it was no unusual thing for a Samurai, feeling playful, or a little drunk, to try the edge of his razor-sharp sword on some unfortunate coolie.

In the bloody days of the old civil wars of the twelfth century, not only were the lives of the vanquished leaders forfeit, but their families were proscribed, and were wiped out in merciless and barbarous fashion. The blood-baths which followed the defeat of one or another faction were so terrible that the knightly class, the flower of the land, was faced with extinction. The gory rite of seppuku, or hara-kiri (belly-cut), was the characteristically Japanese answer to this vexing problem. In this ceremony the leaders of the defeated party, by cutting through their bowels with their short swords, and severing the great portal vein, washed away in their own blood the attainder of their families, saving them from proscription and at the same time cleansing their own honor. After a battle, the vanguished knelt down by hundreds and performed this act, thus absolving their relations of all guilt. In later, and more effete, days the belly-cut was sometimes a slight, almost symbolic, wound and the coup-de-grâce was delivered by a trusted second (Kaishaku), who severed the bowed head with a blow of his sword.

In more recent years, seppuku was of two kinds, obligatory (abolished in 1868) and voluntary. In the obligatory sort, the subject received a formal intimation that he must die, and the act was accomplished with much ceremony, in the presence of witnesses. The bloodstained short sword was often sent to the throne as proof that the deed was done. It was in much the same spirit that a noble Roman would fall on his sword—or in more modern times, a disgraced officer might be presented with a loaded pistol—with the broad hint that he put it to good use.

The voluntary kind were, and still are, often carried out in protest; out of loyalty to a dead superior (in early days retainers often voluntarily joined their liege lord in death); or, as in the case among Westerners, because of personal grief or misfortune. Self-immolation among Orientals as a means of protest is not confined to the Japanese, as is shown by the recent (1963) suicides, by burning, of several Vietnamese monks.

Another illustration of the Japanese code of military honor is the story of a Captain Kani of the 24th Regiment. At the first capture of Port Arthur (November 21, 1894) the captain, who had been seriously ill but insisted on leaving the hospital to take part in the attack, fell exhausted within a hundred yards of the ramparts of a hill fort, which his men went on to capture. An Occidental would have felt honor had been satisfied, but not the gallant captain. He was carried back to the hospital, but, on recovery, he made his way to the spot on which he had fallen and there committed suicide.

The idea of disemboweling oneself as a protest, because of some insult or to avoid dishonor, is incomprehensible to Westerners, and the suicides of Japanese soldiers, often by clasping a grenade to their stomachs, came as a shock to Allied soldiers during World War II. However, to the Japanese, to surrender was to dishonor oneself, as being unworthy of country, Emperor, ancestors, and relations. "In case you become helpless, commit suicide nobly," reads one directive.

This attitude also does much to explain the harsh treatment of Allied prisoners of war who, by giving up, became, in Japanese eyes, objects of shame and contempt.

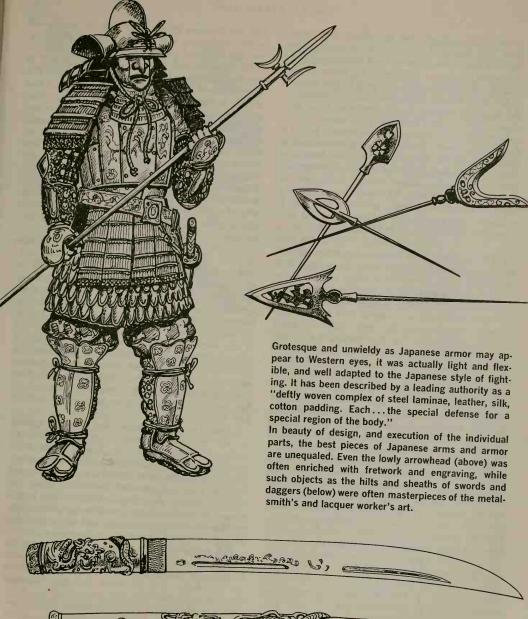
From a military viewpoint such beliefs worked in two ways. It undoubtedly encouraged the desperate last-ditch stands for which the Japanese were famous, defending each inch of ground to the bitter end, and in which whole units often perished to the last man. Prisoner to casualty ratios in World War II were unbelievably small by Western standards. In the Aitape (New Guinea) campaign 8825 Japs were killed and 270 captured (it should be noted that many, if not most, prisoners taken in the early part of the war were badly wounded). Maffin Bay area – 4000 killed, 75 captured; Iwo Jima – 23,000 killed, some 600, many of them Korean laborers, captured; Tarawa – out of a garrison of 5236, seventeen prisoners, plus 129 Koreans taken; and so it went.

On the debit side, there were many instances where the obsession with dying an honorable death for the Emperor caused needless waste of life with-

out any adequate military return. If a man is resolved to die, better to do it in actual combat, where there is a good chance of inflicting some loss on the enemy. The time and money spent in training and equipping a fighting man, and the logistics involved in placing him in some remote spot in the Pacific, were all for nothing if he selfishly went to join his ancestors before doing the last possible amount of damage to the foe. This is a case where Oriental fatalism is not always to the warrior's advantage. The so-called Banzai charges were a case in point. The frenzied rush of a fanatic who does not care if he lives or dies can be a deadly and a fearsome thing, provided the thought of inflicting damage on the enemy is uppermost in his mind. But if the fanatic (often well fortified with liquor or drugs) rushes blindly out in a rash attack against the fire of massed automatic weapons, and gets himself shot down-to no purpose whatsoever except to gratify a death-wish-then, as a soldier, he is a total loss.

The Japanese High Command frowned on such wastage and as the war progressed such suicidal attacks became less frequent. A Japanese combat directive issued before the landing of General Walter Krueger's Sixth Army at Leyte states: "Defensive combat must be active and offensive in nature. However, because such actions as a massed counterattack, unprepared and hasty, are apt to end in sudden defeat and to hinder the execution of subsequent combat, they must be avoided." And again, one battalion was told, "Our philosophy of life is not solved by death, but rather by the degree of success achieved in accomplishing a mission."

Despite these and other warnings, there was still a tendency, in desperate situations, to revert to the traditional Banzai charge. Such charges occasionally achieved a temporary success, as did what was probably the most desperate Banzai charge of the war. This took place at the close of the Saipan campaign, when some 5000 men (nearly all the surviving Japanese of the 30,000 man garrison) were penned in the northern peninsula. Their aged and wounded commander, General Saito, too weak to lead the charge, committed seppuku, his adjutant (presumably because there was no room in the headquarter's cave to swing a sword) administering the coup-de-grâce with a pistol. The attack, launched suddenly at dawn, struck some battalions of the 27th Division and swept them back. The shrieking, screaming masses piled up in front of machine guns until the guns could not fire. Marine artillerymen fired away all their ammunition at point blank, then fought with pistols and carbines. The attack was finally contained and by evening the





position was restored, but the charge had caused some 1400 American casualties. Four thousand two hundred and eleven Japanese dead were found in the area—one for three—which was a far higher proportion of U.S. casualties than for most Banzai charges.

The same suicidal tendencies prompted the use of the Kamikaze (Divine Wind) squadrons. There have always been, in every land and every army, individuals who as a last resort would deliberately perish if by so doing they could inflict some grievous hurt on the enemy. In the West such acts have been few. Near suicidal risks are taken as a matter of course, but there is always the chance, however faint, that the grim reaper will pass by. Obviously, from a military standpoint, there is immense value in a man who is willing to immolate himself in the carrying out of a desperate exploit. There are missions which, to be sure of success, call for the certain death of the ones undertaking them. If the target is important, there is nothing wasteful in this - a pawn for a piece is a worthwhile trade, in war as in chess.

The three Japanese soldiers who turned themselves into a human Bangalore torpedo to blow a path through Chinese wire at Shanghai were immortalized in many shrines across the land. (There is some reason to believe that the three engineers were victims of a premature explosion, but the opportunity for propaganda was too good to lose.) In any case, they were lauded and admired—and probably envied—by millions of their countrymen.

It was only natural that, as the war turned against Japan, this half-mystical urge to attain honor and immortality by dying for the Emperor (not Hirohito the man—but the Emperor as the embodiment of the nation's past and future) would be exploited.

Official blessing was given to a scheme to cripple the U.S. fleet by deliberately diving planes with bombs aboard into the vessels. This suicide operation (which has been much criticized in Japan, and which was not accepted wholeheartedly by all ranking navy men at the time) was given the title "Divine Wind"from the providential gale which shattered the invasion fleet of the Mongols in the thirteenth century. It was admittedly a plan born of desperation, forced on the High Command because of the heavy losses in carrier planes and pilots, and the obvious failure to stop the American seaborne forces by conventional means. It met with considerable success. In all operations - the Philippines, Formosa, and Okinawa thirty-four U.S. ships were sunk, three of them major units, and 288 were damaged, including sixty-six major units. Losses in destroyers was particularly high thirteen being sunk and eighty-seven damaged. For

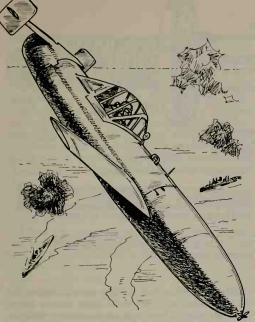
this the Japanese paid a high price in planes and pilots – 1228 being lost, including escorts (these figures are for naval planes only).

Whether the end justified the means is hard to say. Had the operation been successful and the U.S. fleet driven off, history would undoubtedly agree that it had. As things turned out, by October 1944 when operations commenced, the planes and the trained pilots were lacking, and each move was made under the pressure of increasingly heavy American air attacks. Forced finally to use patched-up second-line planes and pilots fresh from the training schools, the Divine Wind dwindled to a gentle zephyr. But with despairing Japanese soldiers committing suicide by hundreds in caves and foxholes and in the jungle, the idea of organized suicide — with a very definite military purpose in view—may not have seemed farfetched.

"It must be borne in mind that for many bundreds of years while the code of the warrior [Bushido], which stressed as necessary a willingness to die at any moment, governed the conduct of the Samurai, similar principles were concurrently adopted by merchants, farmers, and artisans, stressing the value of unquestioning loyalty to the Emperor, other superiors and the people of Japan. Thus, the introduction of the Kamikaze principle was not so shocking to these Japanese as it would be to an Occidental. In addition, the belief that one continues to live, in close association with both the living and the dead, after death, generally causes their concept of death to be less final and unpleasant in its implications." (From The Divine Wind)

It should be noted, however, that there was nothing of battle-madness or sudden desperation in the motivation of the Kamikaze pilots. It was, on the other hand, an extremely coldblooded affair. They volunteered (later some were drafted), underwent special training, sometimes awaited their final orders for months, and even then often had to turn back from a mission to await a more favorable opportunity. For pilots and planes were precious, and only expendable when chances for a successful strike were good.

The mental strain of such a life can scarcely be imagined, yet from their last letters home many seem to have viewed their approaching end calmly, buoyed up by religion and the belief that their supreme sacrifice might help save their country and win them a place in the ranks of Japan's immortals. Again quoting from *The Divine Wind:* "In analyzing the attitude of these men it must be remembered that they considered Kamikaze attacks merely a part of their duty..." When we became soldiers we offered our lives



Manned rocket propelled aircraft bomb. (BAKA)

to the Emperor. When we sortie, it is with the firm conviction that we will fulfill this offer to help defeat the enemy. We would be remiss in thinking otherwise. Therefore "special attack" is just a name. The tactic, while unusual in form, is just another way of performing our military obligation.'... Their sorties were a routine matter. There were no theatrics or hysterics. It was all in line of duty."

The letters reveal some of the strange mixture of mysticism, militarism, and Emperor-worship of the Japanese—so forcign to our Western way of thinking and mode of expression. As was natural, it was the hastily trained reserve officers from colleges and universities who wrote the most—the letters of enlisted men and regular navy pilots were more matter of fact.

One excerpt reads: Words cannot express my gratitude to the loving parents who reared and tended me to manhood that I might in some small manner reciprocate the grace which His Imperial Majesty has bestowed upon us.

One, by a Flying Petty Officer, ends on a poetic note:

How glorious is the Special Attack Corps' Giretsu Unit whose Suisei bombers will attack the enemy. Our goal is to dive against the aircraft carriers of the enemy. Movie cameramen have been here to take our pictures. It is possible that you may see us in news-reels at the theater.

We are 16 warriors manning the bombers. May our death be as sudden and clean as the shattering of crystal.

Written at Manila on the eve of our sortie.

Isao

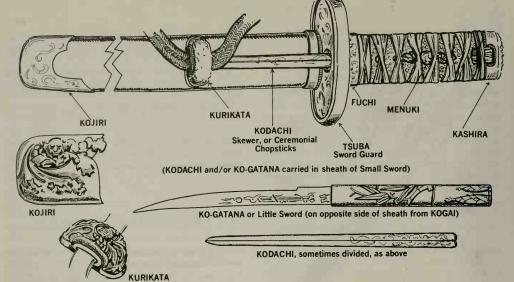
Soaring into the sky of the southern seas, it is our glorious mission to die as the shields of His Majesty. Cherry blossoms glisten as they open and fall.

The End of Isolation

The Japanese sometimes act as if they were the victims of a colossal inferiority complex. If they are, one factor may be that the country has only in comparatively recent times been opened up to a civilization which they effect to despise, but are bent on imitating.

Medieval Japan had considerable intercourse with China and Korea, and at times interfered with Korean affairs. In 1592, under the famous Toyotomi Hideyoshi, a successful invasion of Korea took place, which involved fighting the Chinese. This campaign ended with a Japanese withdrawal (1600). Westerners had appeared in Japan for the first time in 1542, when a storm-beaten Portuguese ship, far off course, landed on an island near Kyushu. A good reception brought trading expeditions, and with them the priests, the first missionary (1549) being the renowned Francis Xavier. The new religion gained a firm foothold in Kyushu. In 1582, there were reportedly 150,000 converts, including many influential Diamyos. Hideyoshi grew alarmed at the growing authority of the Jesuits and invoked some restrictive measures against them, but Japan's trade with Portugal was lucrative and little was done. However, the appearance of rival Spanish Franciscans (1593) and the growing fear (not altogether groundless) that the missionaries were only preparing the way for foreign intervention and invasion, further roused the Japanese ruler against the Christians.

In 1600, a Dutch ship arrived, piloted by an Englishman, Will Adams, who found favor and employment with the Shōgun. Adams lived in Japan until his death in 1620. The Dutch were given trading rights (1605), and the English, a few years later. But in the eyes of the Shōguns, the intrigues of the mis-



No where did the cult of the sword assume such proportions as it did in Old Japan. Termed "The Soul of the Samurai," the weapon (NIPPON-TO) was an object of veneration; the sword smith an artist held in high esteem.

The unique blade was a combination of soft iron and/or several grades of steel—repeatedly hammered, folded, and welded until the billet contained thousands of alternate layers of differing metal. As it was primarily a cutting weapon, the formation of its hard edge (YAKIBA) was the most important step in its manufacture. All but the edge was covered with a paste of clay, sand, and charcoal and the blade was then tempered and quenched in water. It was then ground, polished, and sharpened. The tempered edge, which shows up as a wavy, pearly band on the finished blade, is exceedingly hard, while the back is soft and resilient enough to withstand the shock of the hardest blow (were the back as hard as the edge it would shatter).

Blades by famous makers (they were signed on the tang) some dating back to the ninth century are so valuable that few have ever left the country. NIPPON-TO fall into four categories—KA-TO, real antiques; SHIN-TO, forged in the last two or three centuries; SHINSHIN-TO, very recently forged; and GUN-TO or government issue, mass produced for the armed forces in World War II (these have serial numbers). Small swords (WAKIZASHI) were from 12"—24" long. Long swords (KATANA) some two handed, had blades of 25–32 inches.

Sword furniture was interchangeable. Elaborate designs were created for different costumes and occasions, and the ancestral blade might be "dressed up" in a variety of trappings. The sea-dragon designs above are from the mountings of a sword in the possession of the author.









KASHIRA

sionaries outweighed the advantages of foreign trade, and Christianity was forbidden under pain of death. The Spaniards (the cause of most of the trouble) were all ordered deported (1624), followed by the Portuguese (1639). In 1636 it was decreed that no Japanese subject or Japanese ship should go abroad—nor should any vessel large enough for an ocean voyage be built. The English company (it had been poorly managed) had given up and left (1623), while the Dutch were confined to an area some 300 paces square, where they operated for more than two hundred years, under severe and humiliating restrictions.

Under the successive Shoguns of the great Tokugawa clan, Japan, except for the trickle of goods and information received through the Dutch, lay cut off from the rest of the world. All attempts to open up trade were rebuffed. Four merchants of a trade mission from Macao and fifty-seven of their companions were beheaded by the Shōgun's orders. Thirteen were sent back with the message "Think no more of us, just as if we were no longer in the world." Other trade envoys met as firm, if not as bloody, refusals. For over two centuries the island kingdom lay stagnant, shrouded in mystery - while in Europe the era of the sword and of the religious war gave way to that of the philosophers and the dawning rights of man - and eventually to the age of the engineer. It was the West of the steam engine, electricity, the telegraph and cable, the factory, the rifled musket, and popular education which finally pulled down the barriers erected so many decades before.

The end of isolation was inevitable. More and more foreign ships, many of them whalers, were plying the waters near Japan. Questions as to watering, and the treatment of shipwrecked sailors, multiplied. The Japanese rulers were aware of the growing strength of the Europeans, through the British acquisition of Hong Kong and the opening of the Chinese treaty ports. Awesome tales of the foreign devils spread through the land. Foreign warships were seen off the coasts and their imminent descent on Nipponese shores was heralded by the "Song of the Black Ship."

Through a black night of cloud and rain.
The Black Ship plies her way,
An alien thing of evil mien,
Across the waters gray.

Down in her hold, there labor men Of jet black visage dread; While, fair of face, stand by her guns Grim hundreds clad in red. So ran the first two stanzas; not a reassuring ballad for a population of which probably not one in 100,000 had ever seen a foreigner.

The impact of the arrival of the dreaded Westerners was sufficient to upset the dual system of government which had functioned for so long. There was furious reaction against the Shogun, who had signed treaties with the foreigners as Japan's ruler. (It is doubtful if Perry and the first foreign diplomats were even aware of the Mikado's existence.) Complicated political maneuvers between the great clans and their retainers and the Shogun and the Emperor followed; enlivened by some fighting, and the assassination of several personages of rank, including several foreigners cut down by truculent Ronin. It ended, in 1867, with the ruling Shōgun voluntarily handing over his powers to the Emperor - thus bringing to an end the 264-year rule of the house of Tokugawa. With it fell the whole feudal system, Diamyos, Samurai, and all. The Emperor now resumed his ancient role as true and undisputed head of the state. The heads of the great clans handed over their huge fiefs, in which they had heretofore ruled almost independently, to be reorganized within the new national framework.

Hardest hit were the Samurai. In consideration of their devoting their lives to military service, they had always received their yearly grants. In many cases the incomes were hereditary. Now at a stroke of the brush they were pensioners, some 400,000 of them—the entire warrior caste of Japan. Government decree commuted their pensions at a ruinously low rate—at the same time, allowing them to honorably enter other professions. Finally, a conscription law rang the death knell of their caste by throwing open the profession of arms to all, and in 1876 a law was passed forbidding the wearing of the traditional two swords.

The warrior class had suffered loss of income, status, and their traditions and careers. It is not surprising that thousands joined the head of the great Satsuma clan in a reactionary movement to oust the evil councilors surrounding the Emperor and restore the old ways (1877). What was surprising was that so many Samurai, even of the Satsuma clan, had the intelligence to see that the road forward was the only path for Japan, and remained true to the government. In eight months the rebellion was over, and the modern regime was secure.

Considering the vast changes, which overthrew in a few years a system which had been entrenched for many hundreds, the transition was remarkably painless.

The obviously strong government, the number and

martial bearing of the warrior caste, their fanatical devotion to their ruler, and the speed with which the Japanese - the eleverest imitators in the world adopted Western weapons and training, saved Japan from most of the humiliations or outright loss of territory which was the portion of other Oriental peoples of that period. The intelligent men who guided the nation at this critical time in her history saw plainly that only a united and homogenous nation, well equipped with modern weapons, could spare Japan the fate of her weaker neighbors. As it was, the original treaties - opening six ports to trade and allowing foreigners to live within a 24-mile radius of each, fixing import duties at a low rate, and granting foreigners extra-territorial rights - were not at first irksome. But as the nation coalesced and as national pride grew, the provisions, especially the last, became a source of shame and annoyance.

For obvious reasons, civilized countries are loath to submit their nationals to the jurisdiction of peoples whose notions of law and justice are completely alien to their own. It is not in the best interests of international amity to expose a Westerner to the authority of courts in which torture is a normal form of questioning; all rights, including that of knowing the nature of his crime are denied the prisoner; "witnesses" openly hawk the price of their testimony; and the penalty for even a minor infraction of the law may mean the lopping off of a limb. At the time of the awakening of the island kingdom, Japanese "justice" was not something that would pass muster in a civilized land. However, in a comparatively short time the laws had been made to conform (more or less) with Western ideas, and the Japanese felt that any exceptions cast a reflection on their judicial system.

Several attempts to annul the treaties bogged down—but in 1894 a new treaty with Great Britain abolished extra-territorial rights, and gave Japan the power to fix certain tariff duties. Other nations followed suit. However it was not until 1911 that Japan regained complete control over her tariffs.

To the student of Japan it was obvious that, even at that time, the Japanese were showing the first signs of the touchiness and sensitivity which were to become so evident in the twentieth century. Unlike the Anglo-Saxon, whose phlegmatic temperament comes naturally, the Japanese keeps an essentially emotional nature under constant and rigid control. A Japanese has likened the American temper to a saucepan, whose contents bubble and boil and occasionally lets off steam by lifting the lid, while the Jap is like a pressure cooker, confined but seething inside, and

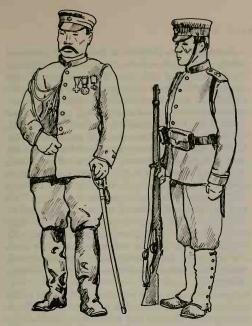
occasionally "blowing its top" with disastrous results. Meanwhile it was also obvious to the Japanese that the key to recognition as an equal in world politics was military prowess and a nation thoroughly prepared for war.

The war with China (1894-95) - again over Korea, which Japan needed both as an overflow for her people and a market for her produce - ended in a Japanese victory. Under the ensign of the Rising Sun, Japanese warships (many of whose officers had begun their careers as top-knotted, silk-clad, twosworded Samurai) defeated their Chinese neighbors in a great naval battle, the first of modern times. Port Arthur was taken, and China ceded Formosa, the Pescadores, and the southern part of Manchuria. However, France, Germany, and Russia, in a joint note, pressured Japan into giving up her conquests in Manchuria. The fact that they were robbed of the fruits of their victory merely confirmed the Japanese in their belief that the spoils only belonged to the victor who was strong enough to hold them.

The Rise to Power

The Boxer Rebellion broke out in 1900, and Japan, being the nearest interested power, was the first in the field. The conduct of her troops in the brief Allied campaign to relieve Tientsin and Peking showed them to be second to none in discipline and efficiency. However, the end results of the campaign were to establish Russia even more firmly in Manchuria and especially in Port Arthur, from which she had helped force the Japanese a few years before —an act which Japan neither forgave nor forgot.

The Japanese bided their time, meanwhile greatly strengthening their positions by an alliance with Great Britain. This provided that, if either ally became involved in a war with a third power, the other should remain neutral unless the first should be attacked by one or more other powers, "When the other high contracting party will come to its assistance." This allowed Japan to prepare a showdown with Russia without having to worry about French or German intervention. Which she proceeded to do, aided by Russian stupidity and stubbornness. Five and one-half months of negotiations finally bogged down, and relations were broken on February 5, 1904. The longawaited (by Japan) war began, in typical Japanese fashion, with a surprise night torpedo attack on the Russian fleet, lying unprepared, in typical pre-revolu-



Staff officer and private, Russo-Japanese War

tionary Russian fashion, in the outer harbor of Port Arthur. This was followed in a few hours by the unopposed landing of a Japanese expeditionary force at Chemulpo.

Japan entered the war with no idea of crushing the great Russian Empire. All she could hope for was to inflict a quick defeat on the Russia forces in the Far East, which were linked to European Russia only by the slender lifeline of the Trans-Siberian railroad. As it turned out, Japanese estimates of their own military requirements, and the amount of traffic which the Trans-Siberian could bear, were both too low. The non-existence of roads in Korea slowed the speed of the Japanese advance and it was not until May 1 that they forced a crossing of the Yalu.

The Japanese Army ready for the field at the outbreak of the war was estimated at just over 273,000 men in thirteen divisions, with 798 guns. In consequence of having trained only one-fifth of the annual contingents of conscripts (in the interests of "economy") the Japanese found themselves with only some 225,000 trained reservists — a fact which was to seriously hamper their campaign.

All military observers agreed that the army, though small, was a model of discipline and devotion. The general impression was one of quiet efficiency and

superb organization, obviously the result of much careful planning and foresight. The services were particularly commended, while all were unanimous in praise of the little (about five feet, one inch in 1904) Japanese infantryman. In heavy marching order, the Japanese soldier, in addition to a blue cloth overcoat, wore a thick brown coat with sheepskin collar, and carried a blanket, knapsack, haversack, water bottle, section of a shelter-half, an entrenching tool, spare boots and sandals, a cooking pot containing a day's rations, as well as a Murata 8-shot magazine rifle, bayonet, and ammunition. Thus burdened he made some astonishing marches, and one of the things which impressed the foreign observers most was his remarkable ability to cover ground. "It is simply wonderful how quickly they move," wrote one, who followed their activities in the Boxer campaign, "they seem to do everything at the double." At a later date a Lieutenant Doud of the U. S. Army, who served for six months on an exchange basis as a company officer with a Japanese infantry regiment in 1934-35 (our relations with Japan were reasonably friendly at that time), recorded his experiences of the stamina of the Japanese soldier. Of typical maneuvers, he wrote: "We started out at five in the morning and marched almost continuously until ten the next morning. In that time we

Infantryman—marching order, Russo-Japanese War



covered 56 miles." After a brief halt the company was ordered to fall back a couple of miles and organize its positions. Another commander marched his men 25 miles a day for a month, while it was common practice to order "double time" at the end of a punishing march - to prove that worn-out men can always force themselves to exert a spurt of effort, even when near exhaustion. Completion of these marches was a point of honor, and to fall out was a deep disgrace. Japanese training always included "heat endurance marches" and "cold endurance marches." These exercises paid off in wartime. In the Manchurian campaign in 1933, a Japanese column marched 20 miles a day for thirteen consecutive days, and 50 miles a day for three days, in a blizzard with temperatures from 20° to 40° below zero.

A foreign observer with the Japanese in North China, amazed at the long-distance marches, was told that much of it was due to the fact that the flag was carried at the head of each regiment. A combination of Emperor-worship and determination not to lose face seemed to keep a man plugging along, after 35 miles or more, "though pain and fatigue were visible enough on his face." This determination, the observer, M. Leurquin, wrote, "is the driving force in Japanese life."

Another fact noted by many foreign observers was that this physical effort was put forth on what, to a European, is a starvation diet. Ian Hamilton noted the "disappearing" effect of rice and offered his opinion that, "A European might as well devour snow flakes for all the satisfaction he gets out of it." Soldier rations were a bento, a canteen or other container filled with a spoonful of cold pork and a quantity of cooked rice - eaten cold. The rations of the troops observed by M. Leurquin consisted of half a pound of rice and some blackish potatoes. This was doused with hot water from rolling cookers (water was all they "cooked"). Lieutenant Doud saw no rolling kitchens, but said the emergency field rations were canned beef and hard tack, with rice or barley when it could be obtained and cooked.

The ability to march and fight on short rations has always characterized the Oriental soldier. It was a contributing factor in the great Mongol victories, and it was a major reason for the successes of the Chinese and North Korean armies in 1950. It also explains, in part, the high death rate in Japanese and Communist Chinese prisoner-of-war camps. It stands to reason that neither armies were about to feed their prisoners more than their own men could expect—so, aside from other forms of deviltry, many died from complications brought on by malnutrition.

General Sir Ian Hamilton, a clever and experienced officer and a veteran of the Afghan, Nile, and Burma campaigns and of both Boer Wars, was sent in 1904 as Military Observer accompanying the Japanese armies in the field. His keen observations on the campaigns and on the Japanese fighting man were put down in his A Staff Officer's Scrap Book. He believed, in his own words: "That up-to-date civilization is becoming less and less capable of conforming to the antique standards of military virtue, and that the hour is at hand when the modern world must begin to modify its ideals, or prepare to go down before some more natural, less complex and less nervous type." He was an admirer of the Boers, whose education and intelligence, he considered, had reached the stage where they were still primitive but could properly employ modern weapons and artillery. He felt much the same way about the Japanese, appreciating both their peasant virtues, and their ready grasp of things mechanical.

He saw in them the embodiment of many of the military traits which civilization was inevitably removing from England and the West, and whose loss he deplored. In particular he envied the way in which in Japan, martial lore and spirit were instilled in the very young, in contrast to the great democracies where anti-militarism was the watch-word. His was the familiar lament of the trained soldier, bewailing the vanishing of the old warrior spirit, and with dire prophecies of younger, more virile nations on the move. It is an old refrain, and has been sung by warriors since time began-the cave men sang it, and Assyrians, Greeks, Romans, and so on to our own generation. It is not a popular theme with the liberal, the educator, or the fond mother. Unfortunately, from a soldier's standpoint, it happens to be a true one.

Happily for the Japanese the softness, the selfishness, the cynicism—diseases which are part and parcel of Western-type civilization—had not yet begun to attack the simple and sturdy peasantry from which many of their fighting men were drawn. They were content to march, dig (the Japanese were indefatigable with pick and shovel) and, if necessary, to die for the Mikado and the Rising Sun flag.

Their tactics, like most of their army institutions, were borrowed from the Germans—as being the most efficient, and victorious, European army. Their close formations at times involved them in needless loss, but the Russian musketry was in most cases very poor (in 1904, they still clung to the outmoded volley firing of the nineteenth century) and enabled the Japanese to take liberties which, against Briton or Boer, would have proved too costly. Port Arthur was another mat-

ter, and here the urgent military and political need to take the so-called Gibraltar of the East as soon as possible involved them in head-on assaults against artillery, wire, machine guns, and heavily fortified permanent positions. In such circumstances, the Russian soldier was at his stubborn best, and the capture of the place led to heavy casualties.

The Japanese fleet, of which some of the lighter units were products of Japanese yards, proved as effective as the army. In leadership, morale, engineering, efficiency, seamanship, and most important, in gunnery, it proved more than a match for the Russian squadrons. It bottled up and finally destroyed the major units of the Far Eastern Squadron, and kept open the life-line between Japan and the armies in the field. Finally, at Tsushima, it administered the most crushing single defeat of modern history. Of the Russian Baltic Fleet, six battleships, a coast defense ironclad, six cruisers, three auxiliaries, and five destroyers were sunk, and two battleships, two coast defense ships, and a destroyer were captured. Only one auxiliary cruiser and two destroyers managed to reach Vladivostok - those other vessels which escaped the Japanese were interned in neutral ports. The victory at one stroke put Japan among the world's leading sea powers, a position which the destruction of the German Navy in 1918, and the post-war reduction of the Royal Navy helped improve.

While victorious on land and sea, Japan was not in a strong enough position to pursue the war to a conclusion. Fortunately, the war was most unpopular in Russia (whose vast manpower had scarcely been tapped), and she was in no mood to average her defeats. Both agreed to a U.S. offer of mediation, but the final terms, while they ostensibly yielded to Japan the points for which the war had been fought, did not meet the approval of the Japanese people. There were riots in Tokyo, and the Prime Minister resigned. Once again Japan was left with a feeling of frustration, although her position as a world power was now secure.

With Japan's rise to power came a gradual change in her relations with the West. The defeat of Russia had added greatly to the currents of unrest which were sweeping the Oriental world. For the first time, a mighty European nation had been worsted by Asiatics, and the foundation of white rule in the East was severely shaken. It was only natural that Japan should begin to see herself in the role of leader of the Oriental world and a champion of the yellow and brown races. More than that—there was already evidence of the Japanese belief that she was ordained to be the ruler of all mankind. Only four years after Perry's arrival, a



Helmet and war mask

powerful and influential Japanese, sensing the divisions and rivalries of the West, penned a plea for the speedy opening of free intercourse with other nations. "No unity exists among states of the world . . . these rivalries will never cease till someone possessed of extra-ordinary power shall assume the hegemony that will unite all others under his sole authority . . . to have such a ruler is doubtless the will of Heaven . . . the object should always be kept in view of laying the foundations for securing hegemony over all nations . . . where foreigners excell us we should remedy our defects . . . we should declare our protection over harmless but powerful nations . . . Such a policy could be nothing else but enforcement of the power and authority deputed to us by the Spirit of Heaven. Our national prestige and position thus ensured, the nations of the world will come to look up to our Emperor as the Great Ruler of all the nations, and they will come to follow our policy and submit to our judgement." This revealing statement, setting forth the doctrine of "Nippon über Alles" was written in 1858!

In Challenge – Behind the Face of Japan Upton Close, who knew his Japanese well, wrote in 1935: "The Japanese are sincere – their faith in themselves is naive and implicit. The astigmatism of the race causes them to regard as reasonable and self-evident the claims made for the Nation of the Gods and its Ruler. When other nations of Asia or we of the West

fail to look upon Japan as the world's ultimate lawgiver and establisher of order, the Japanese are genuinely surprised and pained. They sincerely credit our failure to agree as pathetic ignorance or wilful obstruction of heaven's way."

The words of many of the nation's leaders all show the same belief in Japan's manifest destiny to rule, if not the world, at least all Asia. All, too, show a keen appreciation of timing—the need for waiting patiently until world conditions were such that the process of assimilation could begin without interference. It was this implicit belief in Japan's divine mission—the Imperial Way—that motivated her fighting men, or at least the officer corps and the more intelligent of the rank and file.

The Grand Design

World War I gave the Japanese the opportunity to eliminate one foreign power from Eastern waters. Declaring war on Germany (August 23, 1914) the Japanese, with the aid of a very small British contingent, besieged and took the German-held port of Tsingtao, the defenses of which had been manned by some 13,000 men. Of more consequence, although perhaps not realized at the time by the West, was the Japanese capture of the German-held Marshall, Pelew, Caroline, and Mariana Islands. At the peace conference these islands were given to Japan under mandate, a fact which was to be of vital importance in the war in the Pacific in 1942-45. Further participation in the Great War was confined to the Navywarships being used in convoy duty in the Indian Ocean and the Mediterranean. In 1918, Japanese forces landed in Vladivostok as part of an Allied effort to establish an anti-Bolshevik regime.

The army had steadily grown in size and influence. Its officer corps, in the tradition of the Samurai, was ultraconservative and strongly nationalistic—steeped in the Emperor-cult, and in belief in Japan's mission to "civilize" the world. They were distrustful of liberals and politicians, whom they considered venal and ineffectual. Meanwhile extremist groups, such as the Black Dragon Society, were growing in power, and naturally attracted many young officers to their ranks. These ultra-nationalistic societies (the John Birchers, Minutemen, and Klansmen of Japan) helped the militarists to power by a series of assassinations of liberal statesmen, politicians, and even high-ranking army and navy officers. In 1936 there was a coup-d'etat,

aimed at a new government containing a fair percentage of men opposed to army domination and aggression in China. While it failed, it further intimidated any with liberal or anti-militaristic leanings, and succeeding governments were almost completely dominated by the army.

This state of affairs puzzled many Westerners, who saw in Japan a constitutional monarchy, with the trappings of democracy - parliament, politicians, and all. But the explanation lay in the role of the army in Japanese life - a role far different and far more important than that played by the military of any other country. In the tradition of the Samurai, the army stood for loyalty and selfless service to the Emperor. But unlike the privileged warrior-caste of old, the Imperial Army was open to all classes, and the Japanese looked on it as a symbol of social equality. The people, who for centuries had paid homage to the feudal warrior, felt strong emotional ties with the new army, in which the son of a peasant might be the equal or superior to the descendants of an ancient house. These ties were made stronger by the fact that the majority of the officer corps came from the lower middle class, and there was a close bond between them and the peasants and the laboring men in the ranks.

The army was strongly paternalistic, and succeeded in establishing close relationship between the recruit's family and the unit to which he was assigned. A letter from the commanding officer assured the head of the family that ". . . the officers of the company will take your place in looking after his welfare. We will be to him as a stern father and a loving mother . . ."

The army also did all in its power to give the people a feeling of participation in its activities. Even the billeting of troops, while on maneuvers or in training, was looked upon as a privilege, and officer and private alike were treated as honored guests. The army took particular care to interest youngsters, and school children were given holidays to witness maneuvers or field days. The desire to serve was ingrained from childhood. Many of the conscripts would, during their school days, have belonged to one of the youth training schools, where boys as young as twelve drilled enthusiastically with light rifles. Their yearly maneuvers were made as realistic as possible, army tanks and planes taking part. While probably having little relation to actual warfare, it was part of the spiritual training, the seishin kyoiku, of the whole people.

The induction of the new recruits into their two years' service, on January 10 of each year, was made a holiday affair, part religious, part festive. To many conscripts it was a red-letter day. Dressed in their best, and accompanied by friends, relatives, and official delegations, they presented themselves at the barracks, which were thrown open to the public for the occasion. The departure of the soldier on December 1, after their two years' training, was also marked by much ceremony.

Training was very severe, but infractions of discipline and military "crimes" in general were remarkably few. Disobedience to a superior was held to be disobedience to the Emperor himself. In the Imperial Rescript it states that: "The Supreme command of Our forces is in Our hands . . . We are your supreme Commander-in-Chief. Our relations with you will be most intimate when We rely on you as Our limbs and you look up to Us as your head . . . Inferiors should regard the orders of their superiors as issuing directly from Us."

This Imperial Rescript of the Emperor Meiji, the Bible of the Fighting Services, issued in 1882, is a document of some 2000 words. In it the soldier and sailor is adjured to "consider loyalty their essential duty," to be "strict in observing propriety," to "esteem valor," to "highly value faithfulness and righteousness," and to "make simplicity their aim."

Four or five times a year the rescript was read to each unit with great ceremony, and soldiers were supposed to meditate on its contents (which they were required to know by heart) for at least ten minutes each day.

A junior officer, one Lieutenant Ushiroku of the 61st Infantry Regiment, once made a slight error in reading the sacred document. After writing letters of apology to his superiors and to his parents he committed suicide. His divisional commander was, "deeply moved by Lieutenant Ushiroku's magnificent sense of responsibility."

Besides the mass of the people's recognition of the army's identification with their own lives and with the honor and spirit of Japan and the Emperor, the military, through the government, held complete control over education, printed matter, radio, motion pictures, and every means of disseminating information and propaganda; while "thought control" units kept careful watch to see that no liberals or anti-militarists could raise their voices. Beginning in the late 1930s a propaganda eampaign of gigantie proportions was aimed at welding the nation into a fighting unit, at the same time fanning hatred of the white races, and particularly of America. This was gradually stepped up in intensity, until in 1941 the nation was at fever heat, ready to explode at an instant's notice.

Burke Davis, in his book, Marine, relates how Major Lewis B. Puller, USMC, then (1940) at Shanghai, had dinner with a U. S. Navy Captain and two Japanese Navy officers. During the course of a convivial evening liquor loosened the tongue of one of the Japanese. Dropping the traditional smiling mask, he blurted out, "Soon, American, we will be at war. I will meet you - you in a cruiser, me in a destroyer. We will sink you, and as I steam by, you will shout from the water 'Help me, friend!' Then I will stop my ship and kick you down with my foot in your face and say, 'Die, you American son of a bitch!'" The soberer Japanese, hissing apologics, hustled his companion out. (When, back in the States, the news of Pearl Harbor came over the radio, Puller's wife noticed that the major did not seem at all surprised.)

China, torn by civil disorders, was a prize example of a "harmless but powerful nation." As such she became the second victim of Japan's expansionist pro-

Korea was already enjoying Japanese "protection." There, ever-increasing interference, including the murder (1895) of the Queen, who opposed Japanese encroachments, culminated in 1910 in outright annexation. Almost all government posts, even down to village headmen, were held by Japanese, and the country was completely under the control of the Japanese police and military. All attempts to win independence failed, thousands were killed, others tortured (including the future president, Dr. Syngman Rhee), and tens of thousands imprisoned. These repressive measures warned, or should have warned, other Asiatic peoples what they might expect as members of Japan's great Oriental Empire.

By this time it had long been apparent to Japan's most ardent Western admirers that behind the polite bows and toothy smiles there lurked a more sinister Japan - one which might one day cause considerable trouble. Japan's involvement in China, therefore, was

looked upon with some apprehension.

In the '30s the Japanese already had large interests in Manchuria. Unlike Korea, which is a poor country, and one not suitable for large-scale development, Manchuria had considerable natural resources, as well as being a large potential market for Japanese goods. Friction between Chinese and Japanese in this area had resulted in several minor incidents, but in 1931, the leaders of the Kwantung Army, as the Japanese force in Manchuria was called, seized on one such incident to take Mukden and other cities, and to destroy Chinese power north of the Great Wall. This unprecedented action by an army of occupation illustrates the boldness and independence of the Japanese military - against which the timid home government had no recourse but to resign.

Further demands and incidents touched off the second Sino-Japanese War, which raged from 1937 to 1945. While fatal to millions of Chinese, it also involved hundreds of thousands of Japanese troops. As a proving ground for Japanese equipment it was invaluable, but as the war dragged on, the drain on Japanese men and material became serious. All the great coastal cities, and Nanking and Hankow were taken, but the Chinese moved their capitol (for the fourth time) to Chungking, in remote Szechwan Province, while increasing guerrilla warfare, much of it by Communist units, tied down large Japanese forces. Meanwhile, relations with the West were deteriorating, the military were firmly in the saddle in Tokyo, and it was becoming evident to the Japanese planners that the long-foretold struggle for control of Asia and the Pacific was at hand.

The Struggle for the Pacific

There were many who predicted ultimate defeat, when the full weight of American and British force would finally be brought to bear; but the military leaders were confident of early success, and planned a series of lightning-like blows which would paralyze or destroy Allied forces throughout the East. Admiral Isoroku Yamamoto, C.-in-C. of the Combined Fleet, and the man who had worked unceasingly to build up Japan's naval air arm, told the Premier, Prince Fumimaro Konoye: "If you tell me that it is necessary that we fight, then in the first six months to a year of war against the United States and England I will run wild, and I will show you an uninterrupted succession of victories; I must also tell you that, should the war be prolonged for two or three years, I have no confidence in our ultimate victory.'

The admiral was a true prophet. Spearheaded and protected by the splendid naval air fleets, the Japanese overran the Philippines, Malaya, and the Dutch East Indies. Thanks to their veteran and superbly trained naval pilots, and war-tried planes (especially the excellent Mitsubishi Zero fighter) the Japanese made short work of Allied naval opposition. In the first six months of the war, Japanese naval aviation alone had sunk two aircraft carriers, and seriously damaged a third; sunk an aircraft tender; sunk or seriously damaged two cruisers; and sunk ton destroyers

and a submarine. In addition, losses from Japanese naval forces were four cruisers and five destroyers sunk, and an aircraft carrier damaged by a torpedo. Against this, losses of Japanese warships were extraordinarily light. Up to the middle of May 1942, Allied sinkings of Japanese naval vessels totaled one carrier, a seaplane tender, a mine layer, six destroyers, and eight submarines.

However, losses among the irreplaceable veteran pilots and crews had been heavy, and the American victory at Midway (June 3-6, 1942), when four Japanese carriers, with over 300 planes went down, suddenly tipped the scales in favor of the Allies. Throughout the remainder of the war, the Japanese seamen fought a losing battle, as U.S. carrier forces gradually won control of the air, and surface and submarine forces took their toll. By the war's end, the once-mighty Imperial Japanese Navy was reduced to a handful of battered hulks.

By 1940 the modern Japanese fighting man had been on the world scene for half a century, and his characteristics were well known to the U.S. Military. Or rather, they were well known to a few, those officers who had taken the trouble to brief themselves on the nature of the men who in all probability would sooner or later be their opponents. These officers also realized that, of all the powers, Japan had the only force with years of recent combat experience. China had provided a vast training area, and years of savage fighting had produced an army of battle-tested veterans. But to the average American soldier, and to the general public at large, the Japs were yellow monkeys with buck teeth and not many brains, who hissed when they ought to clap, and couldn't pronounce the letter L. Too much rice (or was it not enough vitamins) had given them some kind of deficiency or astigmatism or something -so their pilots couldn't fly very well, or maybe it was because their eyes were slanted. Their men were little, one American with a bayonet could toss three of 'em, like making hay - only they'd never get that close (everyone knew that all Americans were deadly marksmen, Dan'l Boone and Buffalo Bill had proved that). And Jap ships were funny, too, with big pagoda-like structures that made them topheavy. Probably half of them would capsize in a good gale. And weren't their planes made out of silk or bamboo or something? Good enough to bomb the Chinks, maybe, but what a good old U.S. plane would do to 'em!

So when the Japanese started their second war with a Western power the same way they began their first—with a surprise attack on a fleet that should have

been prepared, but wasn't—there was a cry of "foul!" More of a shock was the performance of the Japanese planes and pilots. Wrote the authors of *Zero*:

"For many years the Japanese Army and Navy had hidden their armament and weapons; the public saw only the obsolete models of heavy guns, warships and planes. In contrast to this policy, other countries obviously attempted to frighten their enemies into submission through constant exhibition of their military forces. Knowledge of the true performance of foreign weapons was denied the public; the propaganda mills ground out exaggerated reports of the actual strength of each nation.

"By importing many foreign aircraft and weapons, we in Japan were able to gauge approximately what these weapons could and could not do. By keeping our planes and other armament within our borders and free from prying eyes, we led the world seriously to underestimate the combat strength of our naval aviation."

Certainly the maneuverable and heavily armed Zero came as an unpleasant surprise, as did the effi-

Officers and enlisted men, World War II. The officer on the right is wearing tropical blouse and helmet. Private on right has tropical adaptation of field cap.

ciency of the Japanese Air Force as a whole. How widespread was this underestimation of Japanese airpower—on which Japan had based the entire strategy of her Pacific war—can be seen by articles such as one in the September 1941 issue of Aviation which stated, among other things, that Japanese pilots in China had proved inferior to the Chinese, and that, according to America's aviation experts, the chief military airplanes of Japan were either outdated already, or were becoming outdated. Two months later, the "outdated" Zero was the master of the Pacific skies. (Another example of the dangers of underrating the enemy, either from egomania, wishful thinking, misinformation, or all three.)

The campaigns in Malaya and the Philippines revealed that there was more to the Japanese soldier than thorough training and discipline. It also brought to the surface a cruel streak, well known already to the Koreans and Chinese. To the natural callousness and disregard for life of the Oriental was added the savagery of a race which had long felt itself regarded as an inferior – and now found itself in the enviable position of "top dog." Coupled with this was the feeling that resistance to the Imperial Way was a form of lèse-majesté, and any guilty of it deserved condign punishment. Atrocities against captured civilians and service personnel sullied the reputation of the Jap-









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anese soldier; and resulted in much hatred, an added stimulus to Allied fighting spirit, and, eventually, to reprisals and executions.

This savagery came as a surprise to many Europeans, who recalled the comparatively gentlemanly behavior of the Japanese in the war of 1904. Had they read reports of the sinking of the transport Kowshing in 1894, and the slaughter of the Chinese, swimming and in the lifeboats; or correspondents' eyewitness accounts of the massacre of the Chinese inhabitants of Port Arthur, after its surrender; they might have thought differently. Wrote Frederic Villiers, the famous English war correspondent: "Not only the soldiers, but the armed coolies took a hand in this bloody work." (Japanese Army coolies were enlisted and used for handling baggage and supplies, both in the Sino-Japanese and the Russo-Japanese wars.) ". . . With every baggage train one met Samurai dressed in the humble garb of the coolie, but with their long Katana slung across their shoulders, carefully swathed in rags to protect the lacquer scabbard, and to keep the precious blade free from dust and rust, pretending to assist their lower-grade brethren in pushing a cart along. If these gentlemen could not for the moment whet their well-tempered steel in the blood of a Chinaman, they would try their ancient blades on the pigs or dogs of the country. It was a piteous sight in passing through the Manchu villages to see a number of badly wounded pigs, some with their heads nearly severed, but still with sufficient life within them to drag themselves along."

The slaughter continued for three days; until, it is said, there were only some three dozen Chinamen left in the town. These were used to bury the dead, and as a safeguard, wore in their caps a piece of paper reading, "These men are not to be killed."

Reports of the massacre raised a great outcry in Europe, and it is to be presumed that the troops who fought the Russians were under strict orders to be on their best behavior. Treatment of the Chinese generally would go to show that the Japanese regarded them as lesser beings, and so fair game for every barbarity.

The Japanese of 1941 was still very close, physically and mentally, to the tough, ignorant, superstitious peasant who made up the bulk of the Japanese armies of 1904–5. Despite a growing skepticism among the better educated city-dweller, the majority clung to a simple belief in the God-Emperor, and the worship of their fighting ancestors. To die in battle meant homage from their families and descendants, and honorable resting place for their spirits at the Yasukuni Shrine, the national warrior memorial.

For such beliefs a certain naïveté is necessary. It would not be difficult to imagine the reactions of a group of hard-boiled U. S. Marines, British Tommies, or "Aussics" to an order like the following, issued as a morale-booster to a Japanese command: "To bring certain destruction to U.S. troops, it has been decided that hereafter the following exercise will be performed at morning and evening assembly.

"1. Close the eyes, clench one or both fists, and raise them to the forchead, and then bellow out 'Chikusho!' ('Damned animal!'). Thus will Yankee courage be sapped.

²². In addition, the ranking officer present will shout, 'Yaruszo!' ('Let's do it!') and all the others will follow in chorus with 'Yarimasu!' ('We will do it!').

"3. Finally, the ranking officer will take a saber in the right hand, and, assuming a rigid stance of steely determination, pretend to cut straight down between the shoulders of the enemy, shouting, 'Sen nin Kiril' ('Kill a thousand men!')."

This is not in any way to deprecate the effectiveness of faith or religious-type propaganda. If this type of mentality can be combined with discipline, modern weapons, and good leadership, the result is a fighting man very hard to beat. The Japanese was, in fact, hard to beat; and it is as well to remember that besides poor strategy he was finally defeated as much by the vast output of the U.S. armament industry as by the American soldier.

An American sergeant who was captured and forced to serve the Japanese as a truck driver (he learned enough of the language to get along) wrote:

"The Japanese soldiers are taught that to die for their Emperor is the most glorious thing that can happen to them. They earn a place in the Yasukuni Shrine and are promoted one rank. But if the battle is big enough, the GI jumps two ranks (provided he is dead). The country yokels think all this is wonderful, but some of the well-educated city boys don't fall for it. Many have told me they are looking out strictly for 'little Willie.' However, they all believe that if they surrender or are captured, they never can return to Japan. They say that if they do, the people will kill them. Even the most highly educated men believe this doctrine. This belief is one of the principal reasons why they are tough opponents. The fear of corporal punishment is also one of the important factors in their battle performance. Personally, I rate the Japanese a third-class soldier, as far as brains and ability to think for himself are concerned. I have met a few Japanese who would be good soldiers in any man's army - but only a few."

He also mentions the brutal treatment of the Japanese enlisted man by his superiors. "The training they undergo for the Army is probably the most brutal in any army. This is to toughen them, or so they claim. The Japanese told me that many commit the honorable hara kiri during the training period because they no longer can stand the brutal punishment being meted out to them. Corporal punishment is practiced to the fullest extent. The soldier must stand at attention while he is being slapped or kicked by his superior. If he falls as a result of a blow, he must get up and resume the position of attention, and receive more punishment. I personally have seen these Japanese beaten unconscious and then carried to their quarters."

This is also borne out by accounts by Japanese soldiers. In Kamikaze, telling of his basic training, Yasuo Kuwahara (he was fifteen at the time) describes beatings with baseball bats and fists until uneonscious; ridicule; and indignities; usage so severe that nine men committed suicide at his camp during his training period. This harsh training was evidently all earried out in an impartial "This-hurts-me-morethan-it-does-you" spirit. Kuwahara wrote: "For us, however, as for all of Nippon's basic trainees, the slightest infraction, the most infinitesimal mistake, brought exeruciating punishment. What I can deseribe only as a siege of ruthless discipline and relentless eastigation began in the first hours of our arrival, and thereafter never eeased during all the days of our training - a siege so terrible that some did not survive it.

"American prisoners of war, 'victims of Japanese atrocities,' generally fared no worse than we did. Some in fact, received milder treatment."

No one who remembers the initial defeats of our Regular Army in Korea in 1950 will deplore a tough training program. On the other hand, there is a limit —a point at which the law of diminishing returns begins to operate. Just where this point is, is a moot question. Undoubtedly it differs from one individual to another, and from nationality to nationality. In general, the consensus of opinion is that in the Japanese Army, the toughening process was carried too far, resulting in blind obedience rather than initiative.

An excerpt from a 1944 Intelligence Bulletin sums up the characteristics of the individual Japanese soldier as follows:

a. Physically, he is hardy and strong.

b. In prepared defenses, he usually is tenacious unto death. (This was not true in some instances in the fighting on Attu.)

c. He is bold and courageous, particularly when his comrades are around and when he has terrain and fire-power advantages.

d. Because of good training, he is generally "at

home" in the jungle.

e. His discipline (especially fire discipline) is usually good.

The poor characteristics may be summed up as follows:

- a. He is usually subject to panic when confronted by the unexpected.
 - b. He is not always steadfast in battle.
 - c. Usually his marksmanship is poor.
- d. Under certain conditions, he is unimaginative; he is a poor thinker when thrown "on his own."

The Japanese military leaders were often prone to inflexibility, betraying an inability or unwillingness to revise plans to meet a changing situation. They also tended to be overcautious, with too much pre-occupation with minute preparations. Nearly forty years before, Ian Hamilton had written:

"On the day they meet a first-class general this passion for making all things secure may be the ruin of our careful little friends." Certainly overcaution and the desire to make "all things secure" robbed the Japanese of a much-needed victory off Samar in October 1944. There Admiral Kurita, although only two hours steaming away from his objective (MacArthur's invasion fleet in Leyte Gulf) turned his ships from the pursuit of the battered escort earriers, and headed for home.

Whatever the shortcomings of his superiors, the Japanese soldier proved a very tough antagonist. After the first few months in most theaters he was often short of food and equipment, and usually without adequate air coverage. Despite the extravagant claims of Japanese victories and frightful Allied losses, toward the end even the most gullible knew that Japan faced defeat. Yet wishful thinking and refusal to doubt Japanese superiority kept hope alive. Captured letters and diaries reveal a peculiar irrationality. Communiqués announced dozens of U.S. ships sunk and hundreds of planes destroyed, yet the defenders of the island fortresses were still under almost daily air attack or naval bombardment.

"Heard the battle-result communiqué," reads one excerpt. "Thirteen enemy carriers, 30 odd vessels sunk; 471 planes shot down." Yet another entry says: "Not even a single plane returned from yesterday's mission. The feeling of faith in Japanese airplanes which I used to have is weakening." "Air raids today since early morning . . . Our planes were all in hiding

and not one appeared." ". . . the enemy planes are very bold . . . When are the Japanese Navy and Air Force going to attack?"

If some of them despaired, as the diaries reveal, there was no talk of surrender, and in most cases, they fought literally to the last man—and no soldier can do more than that.

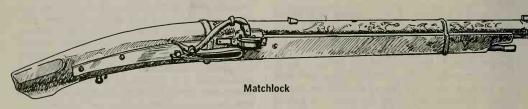
Despite their sense of continuity with the past, the Japanese are no strangers to violence and change. Certainly none could have come with more cataclysmic suddenness than the transition from a proud military dictatorship, with far-flung armies of millions, to a passive occupied province, meekly co-operating with its conquerors. The dreams of empire, the machinery of the Greater East Asia Co-prosperity Sphere, ended with a bang — two bangs, to be exact.

The New Army

The long ascendency of the military was ended and a great effort made during the American occupation to stamp out the societies which fostered the ultranationalistic ideologies. But the laws of the constitution of 1947, forbidding the re-establishment of an army and navy have long since gone by the board. Hoping perhaps that an army by any other name would smell sweeter, the new services are designated

Self-Defense Forces. As of September 1963, the Ground Self-Defense Force numbers 171,000 in five corps of thirteen divisions. The Maritime Self-Defense Force (which will no doubt someday arise again as the Imperial Japanese Navy) numbers 38,000 officers and men, with fifteen destroyers, seven frigates, and five submarines. The Air Self-Defense Force also numbers 38,000. These token forces can be looked upon as a nucleus around which the future services may ultimately be built.

And built they undoubtedly will be. Adjacent countries may view this inevitable resurgence with alarm; but present American interests call for a Japan strong enough to act as a bastion of our policy in the Far East - and in the free world today American interests are paramount. But the Japanese fighting man of tomorrow will be far different from those of Port Arthur and Bataan. He will go to war unfortified by Emperor-worship (Hirohito formally denounced deification of the ruling house in 1946). His ingrained habits of obedience to the family heads - and through them to all higher authority - have already been weakened; while his belief in the invincibility of the Japanese warrior has had a rude shock. He will also have been exposed to Western civilization - more specifically, American-type civilization - for some years, and it remains to be seen whether his native toughness will enable him to survive the experience.





THE CHINESE

There lies a sleeping giant. Let him sleep! for when he wakes he will move the world.

NAPOLEON BONAPARTE

The history of China is as full as that of any other country with tales of campaigns in far lands, invasions, civil wars, and rebellions. One of the most widely quoted generals in the world, Sun Tzu, wrote his military maxims some 2500 years

ago. And at the Celestial Empire's extent, conquests had carried the Chinese banners into Korea, Turkistan, North Western India, Annam, Burma, Java, and Ceylon. Yet the fighting man, even the general, was far down the social scale — a rude fellow, a necessary



Warrior c. 1400

evil, and one to be looked down on as the lowest of the low.

As little as sixty years ago the Chinese soldier was a figure of fun—costumed and pigtailed as in a bygone era—and officered by gentlemen in long robes and mandarin hats. He was a member of a profession despised in his homeland for many centuries—a calling reserved for riffraff, bandits, and ne'er-do-wells. "As you do not use good metal for nails," went the Chinese proverb, "so you do not use good men for soldiers."

With such a value placed on militarism it is not surprising that the country was prey to Mongol and Manchu; and finally to the encroachments of the West and of Japan. Only China's huge size and the vast numbers of its population saved it from complete dismemberment.

But there was nothing wrong with the Chinese fighting man, despite his lowly status. The great Taiping Rebellion (1850–64), which laid waste several provinces and took millions of lives, was put down partly by the Imperialist forces but mainly by the efforts of a Chinese corps – officered and trained by Europeaus. This "Ever-Victorious Army" was led first by the American soldier of fortune, Frederick Townsend Ward, and after his death in action in 1862, by the Englishman Charles "Chinese" Gordon (who, as

Governor General of the Sudan, met his death when Mahdi's dervishes took Khartoum in 1885). The men won the praises of their officers for their steadiness and discipline; and proved that, properly led, the Chinaman would make a first-class soldier. The Imperial troops fought well in 1894 – depending on the behavior of their officers – although the sight of their oiled-paper umbrellas in the firing line amused foreigners, and provided the Japanese with excellent aiming points. Their ships were modern and many at the Yalu battle were fought until they went down. Had the gunnery of the Chinese been equal to their bravery, the battle might have had a different ending.

But it is a far cry from the umbrella-wielding troops of 1894 to the dun-colored hordes who swarmed across the Yalu in 1950. In the meantime China had undergone one revolution, which in 1912 swept away the old Manchu regime and brought her, willy-nilly, into the modern world; and a second, and much more violent one, which had shaken her whole social and economic structure to its foundation, and brought her not merely into the Communist camp, but a position as the champion of militant, uncompromising Marxism. In the process, the soldier has progressed from a military joke to a veteran fighting man, equipped with all the modern apparatus of war, including the means of producing and (although this may, as of 1966, take a year or two) delivering the atom bomb.

How effective the Red Chinese war effort will be in the near future is partly a matter of how fast the industrialization of the nation can be achieved; and what will be the future of its relationships with the highly industrialized Soviet Union. But, as the Chinese intervention in Korea in 1950 proved, in a limited war (and this is the kind of war which we are likely to face in the East, at least for some years) the Chinese soldier, deficient as he may be in mechanization and air-power, is a courageous, efficient, and stubborn adversary.

The People's Liberation Army

The Red Chinese People's Liberation Army is a descendant of the Worker's and Peasant's Red Army, which had its beginning in 1927. At that time the conservative elements of the Kuomintang or Nationalist party, under Chiang Kai-shek, began a bloody

purge of its Communist elements. The Communists formed fighting units, and for several years maintained the struggle with the Nationalists (who were by now embroiled with the Japanese) with varying degrees of success. In 1934, the seventh year of this "Agrarian Revolutionary War" the Reds were driven out of their main base in Kiangsi, and began a yearlong fighting retreat, the famous "Long March," which took them through southern and western China to Yenan, in the northern Shensi Province.

This was a march such as the world had never seen. Six thousand miles long, the route crossed eighteen mountain ranges, and twenty-four rivers. One hundred thousand Red soldiers began the retreat—some 20,000 lived to reach Yenan. The survivors were veterans indeed—and they formed the nucleus of the great Communist armies to come. Wise in the ways of Marxist propaganda, they began the great struggle to win over the people (the vast majority of them peasants) to the Communist cause.

So well did they succeed and so rapidly did their numbers increase that at the end of World War II their strength (these are Chinese Communist Party figures) was over 1,200,000. With Japan defeated, the war against the Nationalists, the "War of Liberation," was resumed with renewed vigor. The Communist

Rifleman-Sino-Japanese War



armies were re-equipped with Russian and captured Japanese weapons, and by the end of 1949 had succeeded in driving the remnants of the Nationalist forces into exile on Formosa. At that time the party members were estimated at 5,000,000. Their victory over the Nationalists, who were partly American trained and equipped, was primarily an ideological rather than a military one. Red propaganda, working on a people who were suffering from the effects of years of war and who had lost faith in the reactionary, ineffectual, and often dishonest government of Chiang Kai-shek, won over large sections of the population, as well as whole units of the Nationalist forces. This is not to infer that there was not a great deal of bitter fighting. The struggle was long and hard, and not always in favor of the Communists. But to win, the Nationalists needed the support of the bulk of the peasantry, and this they had lost. Losing it, they lost the war; and on October 1, 1949, the People's Republic of China was proclaimed.

A year later the armies of the Republic were thrown against the victorious American forces advancing toward the Yalu River.

Our knowledge of the Chinese Communist forces, or PLA, at that time was fairly extensive. Many U.S. officers had been in contact with the PLA through General George C. Marshall's attempts to mediate the quarrel between the Nationalist and Communist governments during the War of Liberation. Most of the facts and figures quoted below are from Lieutenant Colonel Robert B. Riggs' Red China's Fighting Hordes and deal with the PLA forces as of 1950. At that time the armed forces amounted to some 2,650,000 in 239 divisions, with a further 10,000 Air Force personnel, and 60,000 sailors. It was variously armed: with weapons and equipment captured from the Nationalists (most of which was American), taken over from the Japanese, or supplied by the Soviets. The latter source was the most important, as ammunition for the weapons and spares for vehicles, etc. could only readily be obtained from the Soviet Union. Planes were Russian, and included the antiquated YAK-9 and YAK-15 fighters and the new MIG-15 jets. These last were well-armed - one 37-mm cannon on the right wing and two 20-mm on the left - with a speed of 615 mph at 25,000 feet and a range, with wing tanks, of between 700 and 800 miles.

A Chinese infantry regiment was supposed to contain about 3200 men, and there were three to a division. However, as regiments were seldom up to strength, an average division might contain some 7000 men. Two or more divisions made up an army.

Present estimates (1964) of Chinese Communist

forces give a standing army of 3,000,000; regional troops, 1,500,000 to 2,000,000; and a militia, poorly equipped, of some 13,000,000. The Air Force has 3000 planes of Russian design; and the Navy, two light cruisers, five destroyers, twenty submarines, and thirty-two smaller craft.

The Chinese who fought in Korea in 1950 were, by American standards, ill-equipped in many categories. Bugles and whistles frequently took the place of field radios. They had little armor, and, until their trains caught up with their infantry columns, little artillery. Their greatest weakness was in the air, and the UN forces could count on air superiority at any and all times. This was to have a vital bearing on the campaign—and was possibly the deciding factor.

Allied control over such roads and railroads as there were made it necessary to move all troops and supplies by night, and imposed a tremendous strain on the scanty transport. The ability of the Chinese to move quantities of material down the peninsula in the face of constant air attacks was one of the most remarkable features of the campaign. This was made possible only by the sturdiness and endurance of the tough Chinese and North Korean soldiers. These not only manhandled thousands of tons of food and ammunition but showed superb march-discipline, seldom breaking cover in daytime and "freezing" when discovered by flares dropped from aircraft at night.

A more complex military machine could not have maintained itself in this fashion. It was only because the Chinese soldier was accustomed to living and fighting on a fraction of the requirements considered necessary to support an American soldier in the field, that the Communist forces were able to wage war at all. As it was, their supply situation was often critical, and they were never able to build up sufficient men or supplies to exploit a breakthrough.

Initially, both the North Koreans and the Chinese made considerable headway against the American and ROK forces. In part this was due to lack of training, discipline, and stamina on the part of our troops; but a great deal was the result of the quick thrust of the Red forces, and of their techniques of envelopment and infiltration. Much of Korea is broken by hills and ravines, unsuitable for mechanized forces, and in the north is split by high mountain ranges. This type of country made the use of the standard American practice of a continuous battle line, with flanks protected, almost impossible to achieve. Knowing this weakness, the Reds made full use of it, often forcing retirement of larger and well-entrenched U.S. units by slipping round their flanks and shooting up the rear echelons.

Because of their superior fire-power, when Americans held their ground they could usually inflict terrible losses; for once committed to an attack, the Reds often continued it, regardless of loss, long after the situation warranted. Sometimes these mass attacks paid off, especially against troops who were cold, tired, and shaken by previous losses. Against veteran troops they seldom did, and the brassy Chinese bugles only served to send swarms of quilted, poorly fed, and often poorly armed Reds against the massed fire of Allied automatic weapons and artillery.

No American who fought in Korea will question the Chinese soldier's guts. Time and again they went forward over their own dead, against devastating small arms fire and artillery barrages which covered whole hillsides with shell splinters—and bodies. After the attack on the U. S. 2nd Division (May 11–21, 1951) some 5000 Chinese corpses were counted in one valley alone, and the total Communist dead for the ten-day effort were estimated at 65,000.

Numbers alone cannot make headway against superior fire-power, but it is interesting, and a little frightening, to speculate on what the outcome of the Korean conflict might have been if the Red assault troops had been supported by proportionate numbers of tanks, guns, and planes. Fortunately for the West, it will be many years before the Chinese nation, which in 1964 is estimated at some 700,000,000, can industrialize sufficiently to equip and supply armies commensurate with its size.

At the time of the Korean War the PLA was believed to be made up roughly as follows. Veterans of the whole civil war, the "Old Guard," dedicated Communists all, the cream of their armies (25 per cent); Veterans of World War II (15 per cent); Ex-Nationalist troops, whose Communism was probably only skin-deep (30 per cent); and recruits "inducted" since 1948 (30 per cent). These last may have had little love for Communism or the PLA. They had, in many cases, been pressured into joining the army, and were given only scant training before being sent into action.

Indoctrination in Marxist ideology plays a large part in Communist military training. Lectures, meetings, posters, slogans, and all the modern means of disseminating propaganda are used to constantly din into the recruit the beauties of Red rule, and at the same time to instill hatred of the Capitalist-Imperialistic Monsters of the West. Discipline is most severe, and the fear of heavy punishment or death is an incentive where love of Communism might falter. Training is rugged. The already-tough Chinese are hardened still further, until they can probably out-

march and outdig any troops on earth – as well as act as human supply trains.

The Chinese in Korea were not noted for their marksmanship, but they were liberally supplied with automatic weapons, which they used to good effect. Toward the end of the war the Chinese infantryman, when attacking, was armed almost exclusively with grenades and a submachine gun. This last was usually the Russian 7.62-mm PPSH 41; a cheap, rugged, exceedingly dependable weapon, with a cyclic rate of 600 rounds per minute, and a 71 round magazine -one of the best "burp" guns developed in World War II. Later, during the truce talks, when the front stabilized and such names as Bloody Ridge, Heartbreak Ridge, and Pork Chop Hill began to appear in the communiqués, they brought up large quantities of artillery and heavy mortars. The task of supplying the insatiable tubes with fodder, enough to lay down hundreds of shells per minute (the average number falling on UN positions toward the end of the war was 24,000 a day) in defiance of U.S. air interdiction, was one to break the hearts, and backs, of lesser men. But the Chinese and their North Korean allies accomplished it-manhandling ammunition by the truckload over mountains and up ravines, working almost entirely at night to avoid the sharp eves of the USAF.

The Chinese soldier in Korea accomplished a great deal. Lcd or driven by veteran and fanatical officers and NCOs he pushed back strong UN forces; then, by a series of desperate holding actions, forced a stalemate. Unlike the Japanese in 1941, who had local control of both sea and air, he did this against an enemy who had complete control of both. An enemy, furthermore, already alert, flushed with victory, and more powerfully armed than any forces that the Allies could muster against the Japanese ten years before. Often desperately short of supplies, harassed by fighter planes armed with cannon, bombs, and the dreaded napalm; and subjected to artillery concentrations unknown in World War II (U.S. artillery supporting the 9th Regiment's attacks on Bloody Ridge fired over 450,000 rounds) the Chinese fought a murderous and stubborn battle.

This was sixteen years ago, and we may be certain that the masters of Communist China have not wasted the intervening years. If—or, more probably, when—American forces again meet the Chinese in the field, we may also be certain that the soldiers of the PLA will be at least as physically and mentally tough; better trained, and far better equipped and supported than the men whose bugles rang through the bloody hills and valleys of "Frozen Chosen."



NATIVE TROOPS

NTIL the troops of the Czar came face to face with soldiers of a warlike, well-armed and well-organized Oriental power, the long succession of victories and conquests by men of European descent (often against overwhelming odds) over warriors black, red, yellow, and brown had firmly established the cult of white supremacy. Forgotten were the days when the Arab, the Ottoman Turk, and the Mongol threatened the very existence of Western civilization. Non-whites by the millions had fallen under the sway of the great colonial powers—after tens of thousands had fallen under shrapnel and bullet. So when the wreckage-strewn waters of Tsushima Strait closed over the battered hulls of Rojestvensky's fleet,

it came as a shock to many Occidentals to realize that at last the long years of domination by the West might be drawing to a close. But few would have believed that in less than half a century the mighty British Empire would have all but ceased to exist—that the Tricolor would no longer wave over Indochina, large parts of Africa, or, even more shocking, Algeria itself, and that, almost all of Africa and Asia would have seen the slow, and often sullen, retreat of the white legions.

But in the long years of colonial expansion, the forces of the West had met some worthy antagonists. Brave men of many hues had died, sword or spear in hand, to defend their homes, their countries, their na-

tive rulers, and their local gods. And because bravery demands respect, the tribes or races which had resisted the white man most fiercely won their admiration while others, although perhaps more cultured, were dismissed with contempt. Often, the surviving warriors (who were apt to regard any men who could defeat them with considerable awe) were induced to serve their conquerors. Officered by whites, and trained and armed in the Western style, these mercenaries were employed to win further territory, and to keep their brethren in order, if not in actual servitude. Even the independent red man was no exception, and blue-shirted Indian seouts and reservation police played a useful part in the winning of the West.

They are all gone now—the turbaned Indian laneers, the Spahis with their flowing robes, the ebony faces of Senegalese and East African under their red tarbooshes, the slant-eyed Annamese with their flat, cone-shaped hats. Gone, that is, from the army rolls of Britain, France, and Belgium; Germany, Spain, and the Netherlands; and America, for the Filipino Scouts now serve their own republic, as do so many of the others. They were a gallant and a picturesque band, representing the best of many fighting races—feared by their enemies, and the pride and boast of their white officers.

The Gurkhas

It is hard to single out any one race or corps, but it would be my guess that, of all the world's great mereenary fighters, the Gurkha hillmen of Nepal stood -and still stand - at the top of a distinguished list. Unlike the magnificently uniformed Bengal Lancer, or the Spahi of Beau Geste-type movie fame, the stocky, sturdy-legged Gurkha has had little publicity. Yet the sound of their bugles and bagpipes, and the rattle of their musketry have been heard in many lands, and their ashes lie scattered from Flanders and the mountains of Italy to El Alamein, Baghdad, and Singapore. As far as I can gather, no soldier, except an enemy, who has had to do with them has anything but praise for them. At the present some Gurkha battalions are still serving with the British Army, and some with the Army of the Republic of India.

Unlike the other troops of the Indian Army, the Gurkhas have no ties with India. They are from the isolated kingdom of Nepal and enlist for a set period in their own regiments, just as did those other mountaineers, the Swiss, four hundred years ago. They are a hill people, living almost in the shadow of Mount Everest, and are of Indo-Mongol descent. The ancestors of the Gurkhas, or Gorkhalis, were Brahmans and Rajputs driven out of India centuries ago by the Moslems. They became the leading tribe of the numerous hill communities, and their rajas ruled in the capital, Kathmandu. The mixture of the fiery, warlike Rajputs and the more stolid but equally warlike Mongols produced a fine fighting stock and it was only natural that eventually they should become embroiled with the Tibetans to the north (and through them with the Chinese) and with the rising power of the English to the south.

In campaigns in 1814–15, after much hard fighting in which both adversaries learned to respect the fighting qualities of the other, the East India Company's army, finally succeeded in defeating the Gurkhas in their mountain fastnesses. However, the peace treaty did little but restore some recent Nepalese conquests to India, and with the exception of the appointment of a British Resident, the mountain monarchy remained in almost complete isolation. The ruler at the time of the great Sepoy Mutiny in 1857, Bahadur Shah II, was a stanch friend of the English, and his timely aid further cemented the relationship between the two governments. However, at no time was Nepal under direct British rule, and by a treaty of 1923 Nepal was recognized as completely independent.

Spahi, French Colonial Army, c. 1910





Gurkha officer and rifleman, 1940

The custom of hiring Gurkha soldiers dates back to the dark days of 1857 and the number of regiments was finally increased to ten, of two battalions each. In 1914 these two battalions were raised to four, in the customary British manner. As with other Indian Army units, native officers served along with British officers.

Gurkha regiments were part of, but separate from, the Indian Army, the ten regiments forming the Gurkha Line. They were listed as Rifle Regiments and wore, for full dress, the old bottle green uniforms, with the buglehorn badge and the black buttons and facings. This is supposed to have commemorated the fact that Gurkhas were brigaded with the British 60th Rifles at the storming of Delhi in 1857. Somewhere during those years - possibly because Gurkhas were frequently brigaded with Scottish battalions in the border wars of the '70s and '80s - they also acquired bagpipes; and squat, Mongolian-looking pipers solemnly paraded around the battalion mess table on formal occasions. Also, like British Rifle Regiments, who never formed line, the Gurkhas had no Colors or standards.

Besides their modern equipment each Gurkha rifleman carried a kukri. (Privates in British Rifle Regiments are always called "riflemen" – just as they always fix "swords" instead of "bayonets" – a relic of

the time when the short rifle was issued with a long sword-bayonet, so that the length from butt to tip should be the same as that of the regulation musket.) The kukri is a heavy curved knife, which is used as an all-purpose tool, chopping wood or necks with equal facility. The fame of the weapon has spread, until almost everyone has heard the "wait-til-you-tryto-move-your-head" story, which has had as its victim an Afghan, a Russian, a German, an Italian, and a Japanese depending on the date and the teller. Doubts as to whether even a Curkha can decapitate an enemy so neatly as to leave him still talking, do not alter the fact that enemy troops soon acquire a dislike for the weapon; and the occupants of more than one position have abandoned them rather than await the attack of the little brown-faced men and their peculiar, razor-sharp knives.

The Sikhs

Another favorite with the British public was the Sikh. These tall inhabitants of the Punjab are a religious, not racial group (Sikh means disciple) and are distinguished by their unshorn hair and the iron bracelet. They were a militant sect, dissenters from Brahmanical Hinduism, and soon became the rulers of the Punjab in Northern India. The Sikh army, a powerful force, strong in artillery, and trained, in part, by French soldiers of fortune, grew unruly after the death in 1839 of their great leader Ranjit Singh, the "Lion of the Punjab." In 1845 they crossed the River Sutlej, which formed the southern boundary of their territory, and were met and finally defeated by the British in several hard-fought pitched battles - Mudki, Ferozeshah, Aliwal, and Sobraon. A British protectorate was declared but two years later, the Sikhs, still confident of their military might, broke out in rebellion and the Second Sikh War saw the great battle of Chilianwala (January 13, 1849). British losses were heavy - 2338 - and the battle could be best described as a draw. The final battle, at Goojerat, at which for the first time the British had a superiority in artillery, ended in the complete destruction of the Sikh army, and the Punjab was annexed to British India.

In the Sepoy Mutiny the Sikhs, like the Curkhas, supported the British, and thousands flocked to the standards, partly out of partiality to the British, whom they admired as worthy opponents, and partly out of dislike for the Muslims and Bengalese who made up



Indian trooper of the Governor General's bodyguard, c. 1910

a large part of the rebel forces. The British were not slow to recruit from among these stalwart fighters, and Sikh regiments were a valued part of the British Indian Army until 1947—and still serve in the Army of the Indian Republic.

The Pathans

Another famous corps was the Guides, numbering in their ranks many of the fierce, hawk-beaked Pathans from the hills of the North. Hillmen also served in the Khyber Rifles, another unit well known to readers of books of adventure. The wild tribes of the North (and there is no doubt that the Northerners made far better soldier-material than the softer folk of the south) provided almost constant practice in warfare for the forces in India, and offered as fine, if not a better, proving ground than North Africa did the French. Most British officers of note in the years prior to World War I made their reputations on the North-West Frontier, and the passing of these practical, if deadly, maneuvers, will be missed in both armies.

The tribesmen of the frontier lived in an almost constant state of war, their economy being based largely on plunder, and their social customs on the blood-feud and inter-tribal vendetta. Robbery, murder, and kidnaping were part of everyday life and war was considered a pastime. As many had served enlistments with one or another of the numerous volunteer detachments raised to police the frontier, they were well versed in British Army ways, and often, between skirmishes, would exchange gossip with their kinsmen in the opposing ranks. Even those whose acquaintance with the British was limited to an occasional long-range shot felt a certain affinity for the opposing forces, and after a campaign many such tribesmen, in all good faith and as subjects (if not always loyal ones) of the King, would apply to the Political Agents for the Frontier Medal, with appropriate

Although the Pathans considered war a sporting pastime, they carried it on with a savagery reminiscent of the Apaches at their worst. Non-Moslem wounded—no man in his right mind would surrender to them—were tortured and mutilated with fiendish attention to detail. The employment of all sorts of traps, trickery, and treachery was standard practice, and the North-West Frontier was no place for the careless or the incompetent.

The keen-eyed Pathan was a superb marksman, and rifles and ammunition were worth their weight in gold. Field Marshal Sir William Slim, whose ability as a writer matches his prowess as a soldier, relates in his *Unofficial History* the aftermath of an affair in which the tribesmen had not lived up to their usual reputation.

"In the informal way things are done on the Frontier, we sent a message to the enemy, telling them, among other things, that we did not think much of their shooting. We received an answer which complimented us on our raid. It had been, they said, a thoroughly good show, and they regretfully admitted that for the first time on record we had killed more of them than they had of us . . . Touching the matter



Indian trooper-Skinner's Horse, c. 1910

of their shooting they were rather ashamed, but there was a reason. Their rifles were all Short Lee-Enfields, acquired in previous fights with our troops—a shrewd cut that—while their ammunition, which had been generously provided by the Amir of Kabul, was British also, but it was unfortunately the old pattern Mark VI, and the rifles were sighted for the new Mark VII. They had not realized this at the time, but had now calculated the adjustment necessary, and they would be delighted, should we give them an opportunity, to demonstrate what a difference it made to their shooting."

The martial races of India have produced many fine fighting men. Properly led, armed, and organized, many of them compare favorably with any on earth. India was won with the sword, and the winning of it is soldier-history at its best. The men who won and held it were mainly Indians themselves, hired soldiers who stood by the old Company or the Crown and who, in many cases, served an alien race with more than the usual obligation of mercenaries to their paymasters. The average Indian may have had little love for the average Englishmen, but there was a bond between most officers and their men which overstepped the dividing line of race, color, and religion.

Quoting from The Armies of India: "It was not the fulfillment of a contract that made Clive's sepoys at Arcot give up their rations to the European soldiers, or the 35th Native Infantry do the same when the earthquake killed the remaining live stock in Jellalabad. It was not the acting up to the letter of the law that kept some hundreds of Poorbeah sepoys true to their salt within the shattered defences of Lucknow, or took the Gurkha and Punjabi soldiers up and through the Delhi breaches, or made the Guides escort in Kabul sell their lives, for the sake of their British officer, to the mob and the dog Heratis. No contract alone takes the native of the plains to serve the Sirkar in the snows of the Afghan hills, and to tramp the burning desert, or down to the swamps and the fever of the eastern frontier."

Now the British Indian Army is a thing of the past, and it remains to be seen if the forces of India and Pakistan will live up to the great reputation their regiments won in the days of the British Raj.

The Dervishes

In 1881 a native of Dongola, in the Sudan, a devout Moslem and austere religious teacher named Mohammed Ahmed ibn-Seyyid Abdullah proclaimed himself the Mahdi (the Deliverer). There have been several of these "deliverers" in Moslem history—men who aspired to fill the title of Imam of God, foretold by Mohammed. Some have been great Caliphs, and some have been obscure hermits, but few attained the brief, but world-wide attention accorded this son of a Dongolese boat builder. He preached a holy war against the corrupt Egyptian rulers of the Sudan, and as his power grew, defeated Egyptian forces sent against him, including one of 10,000 men commanded by William Hicks, an English general in the Egyptian service, who was known simply as Hicks Pasha.

In the ordinary course of events the Mahdi's followers would probably have reconquered the Sudan, and their leader and his next-in-line would have ruled their wild and arid land (when Allah made the Sudan—the saying goes—he laughed!) with considerable bloodshed—as it had always been ruled—and a minimum of outside interference. But the West was pressing into Africa from all sides: for trade, for raw materials, for land, to spread the Gospel, to stop the slave trade, and for all the reasons which drove Europeans to invade black Africa. More important, Egypt was now under British protection, and was



Sudanese Followers of the Mahdi, c. 1890

clamoring for an end to be put to the depredations of this holy man of the deserts and his growing army of fanatical followers.

And so Chinese Gordon, of Taiping fame, went to Khartoum, on an ill-defined and ill-supported mission to expedite the evacuation of Christians and Egyptians from the Sudan, and, if possible, to hold the city for the Khedive. There he was besieged, and as Dervish warriors gradually closed in on the city, public opinion in England at last forced a reluctant Mr. Gladstone to send relief. Not the usual Egyptian expedition of fellaheen conscripts and hired blacks, but British Regulars. And it was then that the redeoats first made the acquaintance of the savage Arabs of the Sudan. They were Arabs in name only, for the Sudanese blood predominated - huge men many of them, dark and fierce eyed, with mops of long hair soaked in rancid butter - the Fuzzy-Wuzzys of poem and story.

They were magnificent fighters, armed with great crusader-type swords, broad-bladed spears and shields of rhinoceros or elephant hide. Their swift onslaughts, with the many colored banners and the frenzied beating of their Dervish drums, had been enough to rout columns of Egyptians, almost without the latter staying to fire a shot. Now they met troops made of sterner stuff—men who waited patiently in square under the wild fire from captured rifles and trade muskets, and who opposed their frantic charges with sheets of lead and a bright hedge of steel.

Several battles were fought-El Teb and Tamai and the fight for the wells at Abu Klea. The advances were made in brigade squares, with the baggage animals in the center. At Abu Klea, despite the fire from the British breechloaders and a crank-operated Gardner machine gun, the Dervishes took advantage of a bulging of the square at one corner, caused by the lagging of the baggage animals, and burst in. Things took a grim turn for a moment or two. The Gardner jammed (a common failing of early machine guns) and the square was a pandemonium of hacking, stabbing savages; terrified mules and baggage camels and equally terrified native drivers; and British troops, in places jammed so tight against their opponents that they had room neither to shoot or use the bayonet. By a great effort the gap in the square was closed, and when the smoke cleared (the Martini used a black powder eartridge) every Sudanese who had entered was dead. But it had been a near thing, and the British soldier, quick to admire a gallant enemy, eould say in Kipling's words:

"We sloshed you with Martinis an' it wasn't 'ardly

But for all the odds agin' you, Fuzzy-Wuzz, you broke the square."

For all the hard fighting, the relief columns had started too late. Abu Klea was many weary, waterless miles from Khartoum and nine days after the battle the city fell (January 26, 1885) and Gordon's head was on a spear outside the Mahdi's tent. The relief column had suffered many casualties and was short of supplies and ammunition. On hearing the news of the disaster, it turned back.

With the death of Gordon and the withdrawal of the British forces, the Dervishes ruled supreme. The Mahdi died and his successor, the brutal Khalifa, governed in his stead. For thirteen years the Sudan was a land of blood and misery. Then, under Lord Kitchener, the British came again. Not in red, this time, but in khaki, with magazine rifles and Maxim guns, and with them, well-trained battalions of Egyptian and Sudanese mercenaries. This time they built a railway as they came, and the whole expedition reflected the iron will of the man who organized and led it.

On September 2, 1898, the outposts of Kitchener's forces saw the great masses of the Khalifa's army advancing from Omdurman. It was a spectacular sight, a sight such as the Crusaders must have known, and one the like of which will never be seen again. Here were turbaned horsemen clad in Saracenic chain mail; spearmen by the thousands, in their white robes patched in black, in memory of the Mahdi's muchmended garment; half-naked swordsmen with their great cross-hilted weapons gleaming. Over their heads streamed the flags, hundreds of them, of all colors; and above all flew the great black banner of the Khalifa himself. Drums thundered above the stamp of thousands of feet as the last of the great native armies of the past rushed on to meet the forces of the present.

Winston Churchill, attached at the time to the 21st Lancers, wrote: "As the successors of the Saraeens deseended the long smooth slopes which led to the river and their enemy, they encountered the rifle fire of two and a half divisions of trained infantry, drawn up two deep and in close order and supported by at least 70 guns on the river bank and in the gunboats, all firing with undisturbed efficiency. Under this fire the whole attack withered and came to a standstill, with a loss of perhaps six or seven thousand men, at least 700 yards away from the British-Egyptian line."

"No white troops," commented George Warrington Steevens, the war correspondent of the London Daily Mail, "would have faced that torrent of death for five minutes, but the Baggara (one of the fiercest of the desert tribes) and the blacks came on . . . You saw a rigid line gather itself up and rush on evenly; then before a shrapnel shell or a Maxim the line suddenly quivered and dropped . . . But other lines gathered up again, again, and yet again; they went down and yet others rushed on . . ."

Rifles grew too hot to hold and were exchanged for others from the reserve. Maxims rattled and white puffs of smoke from the shrapnel bursts blossomed over the oncoming masses.

"One old man with a white flag started with five comrades; all dropped, but he alone eame bounding forward to within 200 yards of the 14th Sudanese. Then he folded his arms across his face, and his limbs loosened, and he dropped sprawling to the earth beside his flag." Nowhere did the Sudanese reach the Anglo-Egyptian lines—although a few spears fell among the Egyptians—the sheets of fire from thousands of rifles saw to that. Yet all along the line they tried, dying in thousands in desperate rushes, heedless of anything but the frantic urge to get within striking distance of the enemy.

"I saw the full blast of Death strike this human wall," recorded Churchill. "Down went their standards by dozens and their men by hundreds. Wide gaps and shapeless heaps appeared in their array. One saw them jumping and tumbling under the shrapnel bursts; but none turned back."

A little later in the day, Churchill was to witness at close hand what the Dervish could accomplish when faced with his own weapons - the lanee and sword. The 21st, moving toward Omdurman after the repulse of the Dervish attack, wheeled into line to charge a row of riflemen. As the regiment thundered up to this smoke-wreathed line of skirmishers it was seen that immediately behind the riflemen was a small shallow ravine, crammed with Dervishes, perhaps two thousand of them, twenty deep in places. Into this waiting mass plunged the 350 men of the 21st. Into, and in places, through, but the rush of horsemen disturbed the natives not at all. Sabre and lanee against sword and spear was the kind of warfare they understood. Many threw themselves on the ground and hamstrung the horses as they passed. Any soldier who was pulled from his mount or whose wounded horse fell with him, was instantly attacked and cut to pieces. In less than two minutes the Lancers had burst through and gained the further slope - yet in that brief flurry of fighting they had lost twenty-two killed and over fifty severely wounded. Almost all the remainder bore some marks of the fray, while of the horses, 119 had been killed. The men were reforming for a second charge but the colonel, realizing that to attempt to charge back through the ravine might well mean the destruction of the regiment, ordered some troopers to dismount and clear the hollow with rifle

The Dervishes, retreating across the front of the infantry and artillery, lost heavily, but few bodies were found in the ravine. The 21st Lancers were comparatively new in the Army List, the youngest cavalry regiment in the Army, and this was their first campaign. Now they, too, had had their charge, and an expensive one it had proved.

At the end of the day close to 11,000 Dervish dead lay seattered on the plain and an estimated 15,000 more were wounded. The losses in the ranks of the Anglo-Egyptian infantry were 27 killed and 324 wounded. Comparison with the 21st's loss of about a fourth of its men and one-third of its mounts for the killing and wounding of perhaps two hundred Dervishes, showed what the desert man could accomplish with the cold steel.

By afternoon the remnants of the Dervish army was in retreat, after dashing itself to pieces against the relentless hail of flying lead. The emir Yakub and a bodyguard of four hundred of his bravest lay dead around the black standard, while the Khalifa, closely pursued for many days, at last suffered a like fate. Like many of his chiefs, when able to retreat no farther, he unrolled his prayer-rug and took his stand on it to die, calling on Allah and defying his enemies.

Observers present at the battle were deeply impressed by the utter disregard for wounds and death of the Khalifa's soldiers. Religious fanaticism had played a part, but the Khalifa, an ignorant and blood-thirsty fighting man, had none of the mystical qualities of the Mahdi. Loyalty to their ruler and their emirs, the natural toughness of mind and body of savages living in the most primitive conditions, plus a great courage, springing from years of constant warfare, made up the rest.

The grim years of Dervish rule had made enemies of many of their own people; so that the Sudanese regiments played a considerable part in the campaign. Sudanese troops in the British service have fought well in many actions. In World War II they campaigned in Eritrea, Ethiopia, and Libya.

The Ethiopians

Close neighbors of the Sudanese are the Ethiopians. This race, of Arabic descent, but Christian in religion, live in the almost inaccessible highlands of the northeast. Their weapons and methods of fighting were very similar to that of the Sudanese, and there was much border warfare—the Ethiopians being notorious slavers. The Ethiopians fought on several occasions with the Dervishes, and in 1889 defeated them heavily. That must have been an epic struggle—steel against steel—for while both sides possessed a considerable number of rifles, the tribesmen, unlike the sharpshooters of the Indian frontier, had little idea of how to use them.

The Italians, who had acquired territory adjacent to Ethiopia, claimed a protectorate over the country. The Ethiopians disputed the claim, and in the ensuing war inflicted a bloody defeat on the Italians and their native troops at Aduwa (1896) over 10,000 being killed, wounded, or taken. This was the worst defeat suffered by a European power in Africa at the hands of Africans, and effectively put an end to Italian pretensions to Ethiopia until the successful invasion in 1935. Then even the fierce courage of the Ethiopian chiefs and their followers was no match for attacks by large forces of Italians, supported by planes

and tanks. It was not until 1941 that the reconquest of Ethiopia was begun by the British, aided by Ethiopians loyal to Emperor Haile Selassie. The main Italian forces surrendered in May, in which month the Emperor re-entered Addis Ababa.

Over the years the Ethiopian fighting man has won a reputation as a warrior—albeit a savage one; given to slicing his rations off the flanks of still-living cattle, and to castrating his fallen or captive enemies, and wearing the trophics as proudly as any medal winner. Despite these deplorable habits, the Ethiopian—whose Christianity scems to sit somewhat easily upon him—has the makings of a fine soldier, and with modern training and equipment may prove a key figure in the coming struggle for power in Africa.

The Zulus

Far to the south, a tribe of Bantu stock had, in the eighteenth century, become established in southeastern Africa. These were the Zulus, at first only a small tribe, but under able leaders destined to become a power in South Africa. These Zulus, a tall, proud people, were originally probably no more warlike or better warriors than their neighbors; but circumstances forced on them the adoption of a military system unique in a primitive people. Most African tribal life revolves around numerous societies, of semi-religious nature, and it is undoubtedly from one or more such societies that a regimental system came into being. Young men were formed into regiments, and were governed by strict laws; imposing celibacy and other forms of discipline on what otherwise would have been unruly mobs of young warriors.

Chaka, who became chief of the Zulus in 1800, and who was a military leader of great ability, further strengthened military discipline. The regiments were stationed at their own villages, or kraals, and the right of marriage was only conferred by royal favor, for valiant services rendered. The usual long-handled assegai, or spear, was shortened and given a broad blade and a short thick shaft, thus forcing the warriors to come to close quarters. At the same time, the crescent formation of attack was perfected. The central portion, behind which was stationed a reserve, made the main attack, while the horns of the impi or army, encircled the enemy and attacked him from flank and rear. Regiments were of indeterminate strength - varying from 400 men to 2000. Each was commanded by an "Induna" or chief, and was distinguished in some manner from the other regiments,



Zulu warrior—with cowhide shield, throwing spears, and short stabbing assegai

by the color of the cowhide shields or the ostrich plumes headdresses or in some such fashion. Swift movement was a feature of Zulu tactics; an *impi* could cover forty miles in a day.

Under Chaka, the "Black Napoleon," the power of the Zulus and those tribes with whom they associated themselves, grew apace. The Zulu military machine with its ruthless discipline, and superior leadership and organization, was unbeatable. Of those tribes which submitted, some were permitted to join the Zulu nation, and to furnish their quota of young men to the chief's armies. All others were exterminated, and their country turned into a desert. During the course of his 28 year reign, Chaka is said to have all but depopulated Natal, and the vultures and jackals followed the swift passage of his regiments. Two forces led by rebellious lieutenants broke away and conquered lands in the north, and Zulu armies made themselves felt as far north as Nyassaland.

Chaka was murdered in 1828 by his half brothers and one of these, Dingaan, quarreled with the Dutch, and treacherously murdered a party of envoys. This deed was followed by a surprise attack on all the Boers who had entered Natal (1838). A few months later the Boers, fighting from behind their laagered wagons, while others, mounted, attacked from the rear, overthrew Dingaan at the Blood River.

One suspects that discipline in Dingaan's day was

not what it had been in Chaka's time. A later despot, Cetewayo, restored it as much as he was able, and by the natural course of events, fell foul of the British, who were paramount in South Africa.

The war began with a disaster - when the British commander divided his forces in the face of the enemy, and left an unfortified camp. The commander on the spot refused advice from white South Africans to put his wagons into a protective circle. Here at Isandhlwana (January 22, 1879) the camp was surprised by some 10,000 Zulus. Almost all the Europeans (806) and nearly five hundred friendly natives were killed. Several Zulu regiments had moved on from the victorious field at Isandhlwana to attack a small detachment of British at Rorke's Drift. These troops, about eighty men, plus another three dozen in hospital, put up a tremendous fight. Attacked from afternoon to dawn by some four thousand Zulus, they defended their position, part of which was composed of a barricade of biscuit boxes. Six times they drove out the enemy at bayonet point - and in the morning the battered impi withdrew, leaving 350 dead.

Following the usual British pattern, on hearing news of the Isandhlwana disaster, London finally dispatched an adequate force, and the campaign ended, as did the war in the Sudan, with waves of gallant warriors assaulting British squares and being cut down by massed rifle fire. Their military organizations smashed, the Zulus went back to the more peaceful pursuits of cattle raising. But the memory of the wellordered ranks of near-naked warriors, their Indunas at their head; the oval cowhide shields; the tossing plumes, and the glittering points of the stabbing spears, live on in the pages of such writers as H. Rider Haggard and Bertram Mitford, which echo with the roar of war chants, the ominous clatters of spear against shield, and the measured stamp of thousands of feet.

From the quiet of a Pennsylvania farm, and the distance of many years, it is easy to view with some sorrow the passing of the warlike tribes and races which have made brief, but bloody history. Distance lends enchantment, and no doubt many were blood-thirsty rascals who deserved their fate, and whose demise by shell or bullet greatly furthered the cause of civilization. But Dervish and Zulu, Apache and Kiowa (those splendid plains fighters who have been called "the finest light cavalry in the world"), Tuareg and Berber, Arab and Pathan, have all made their little mark in military annals. Perhaps it is just nostalgia, but it does not seem as if the present crop, Viet Cong or Congolese rebel, can match the native armies of days gone by for color and panache.



THE UNITED STATES

The military history of the United States, more than that of any other country, points out the vast difference between the regular and the citizen-soldier—the professional and the amateur. The early wars of the Republic proved time and again the evils inherent in the militia system. Yet this system was part and parcel of the new nation's concept of how its military affairs should be conducted. It was based upon an entirely erroneous premise: that the defense of the country could and should be left in the hands of the responsible citizen. When occasion arose, this stalwart was expected immediately, and cheerfully, to leave farm, forge, or countinghouse and hasten to the mustering place, to be led thence against

the foe. The leading was to be done by worthy and responsible gentlemen who, when the day was won, would quietly withdraw once more into honorable retirement. It was a noble plan (and economical, too) and one well suited to the idealistic thinking then current among the liberal-minded intelligentsia.

It had one grave fault—as a glance at any history book might have revealed: trained soldiers do not spring like Athena, fully armed, from Jove's brain, (nor anyone else's). They emerge, slowly and with much painful effort, from the parade ground; conjured up by shouts and curses and, in the old days, by blows of the drill sergeant's cane. But this unkind treatment sits ill with free men, especially with those to whom

this desirable, but precarious, status is something new, and therefore doubly precious.

Free men elect their representative, who, understandably enough, are sensitive to the wishes of their constituents. So we run head-on into the age-old conflict between the rights of the would-be warrior to comfort and consideration, and the desire on the part of authority to turn him into a disciplined and obedient member of a select group of dedicated men. From the soldier-committees of 1776 to the Doolittle Board of 1946 this conflict has been raging—and it is as vital, and as unresolved, now as it was in Washington's day.

One great drawback, from the soldier's point of view, was the fact that the founders of this country inherited all the Englishman's distaste for, and apprehension of, any form of strong (and therefore potentially dangerous) standing army. "How dangerous it might be," wrote Governor John Winthrop of the Massachusetts colony in 1638, "to erect a standing authority of military men which might easily in time overthrow the civil power."

Quite rightly, the Congress was to hold the purse strings. But the legislators of old were not as lavish with funds for defense as they are today, and, even after grudging consent was given to the founding of a Regular Army, it was often in danger of being (literally as well as figuratively) starved out of existence. It was also the subject of much Congressional interference, which can prove as dangerous as governmental neglect.

The militia myth was no new thing in America at the time of the Revolution. Trained bands, raised in the English tradition, had fought the Indians in the early colonial days - successfully in most cases. As soon as the immediate danger was over they had disbanded and gone back to their homes. All too often, the danger was only averted; and as soon as the troops dispersed, the redskins were on the warpath again. The difficulty of keeping citizen-soldiers in the field long enough to bring a campaign to a conclusion has troubled commanders since time began. The answer has been the professional-the legionary. In America's case the legions were originally provided by Great Britain, and despite occasional reverses it was the redcoated Royal regiments who finally drove the French from North America, and garrisoned the frontier forts.

Barrack-square evolutions, pipe clay, and precision was not the answer to warfare in the backwoods, as defeats like General Edward Braddock's showed. But the assumption by some Americans that the frontiers-

Virginia rifleman



Pennsylvania musketman



man and the colonist were more than a match for the British Regular was a grave error. Wars are not won by sniping from behind trees and stone walls, galling as such tactics may be to troops in close formation.

Undoubtedly the average American was a better marksman than the Regular, who was drilled in volley firing, and nothing else. The disastrous attacks of the British at Breed's Hill (June 17, 1775) which cost them 1054 casualtics, out of some 2400 engaged, proved that. Wrote Lord Percy, of the 23rd, the Royal Welch Fusiliers: "My Regt, being one of the first that entered the redoubt, is almost entirely cut to pieces; there are but nine men left in my Co. & not above five in one of the others."

Much has been written of the gallant men who held the redoubt and the rail fence that day. And rightly; for it was no mean feat for untrained citizens to go up against the British Regular in all his majesty. But as the legend of Breed's Hill grew, it was forgotten that the shattered redoats re-formed, and came again. And again; many of them wounded by now, but refusing to admit defeat—and this time, going up with the cold steel alone, they succeeded. Forgotten, too, is the fact that many patriots, possibly a thousand, stood idle on nearby Bunker's Hill;

nor could they be driven or cajoled into aiding their fellow-citizens a scant 600 yards away. The few men wounded by the noisy but inaccurate fire from the British warships were carried carefully to the rear, "frequently twenty men round a wounded man, retreating, when not more than three of four could touch him with advantage," wrote an American captain. Perhaps the wonder of Breed's Hill was less the number of patriots who fought there—than the number who did not.

The war which was to alter the face of history so drastically was a "little" war—although it went on for eight years, and covered the whole Eastern seaboard. Armies were miniscule. "The largest body of regular troops ever assembled under the American banner" showed 16,782 fit for duty (July 1778), while the number of British Regulars and of the German mercenaries was exceedingly small for the task assigned to them. Thousands of volunteers fought on either side and their true numbers will never be known. (At Kings Mountain, October 7, 1780, of some 2600 men engaged, only Major Patrick Ferguson, the British commander, was a professional soldier.) Many turned out for local engagements, fought well, and then went home, considering their duty done.







Light infantry, Lafayette's corps

While better marksmen, the untrained militiamen and volunteers showed a marked aversion to the cold steel of the British Regulars. The spirit was in many cases magnificent (the men would never have stood the privations and agonies of Valley Forge otherwise) but it was not until Von Steuben had hammered some drill and discipline into the American Regulars - the Continental Line - that they could stand up to the British in the open field. At Monmouth (June 28, 1778), under the eye of their drill master, the American regiments wheeled into line under fire with the precision and steadiness of veterans. (Training, equipment and discipline being more or less equal-men fighting for a cause, are likely to be at least able to hold their own against others, of the same racial stock, who are fighting for a few pennies a day.) Skirmishes and guerrilla fighting there would be in plenty, but it was the line regiments, enlisted, most of them, for three years or the duration, who were the backbone of the Continental Army.

The Regular Army

With the coming of peace, Congress began the first of the many demobilizations which have so often been the prelude to military disaster. "Standing ar-



Continental line

mies" ran the decree which gave the death-blow to the fine Revolutionary Army, "in time of peace are inconsistent with the principles of republican governments, dangerous to the liberties of a free people, and generally converted into destructive engines for establishing despotism." Over General Washington's objections, Congress then proceeded to direct that troops necessary in the future should be raised by the States and that, "the commanding officer be and he is hereby directed to discharge the troops now in the service of the United States, except twenty-five privates to guard the stores at Fort Pitt, and fifty-five to guard the stores at West Point and other magazines. . . ." (my italics) Officers in proportion were to be retained, none over the rank of captain. All hail to the eighty privates! They were the ancestors of the U.S. Army of today.

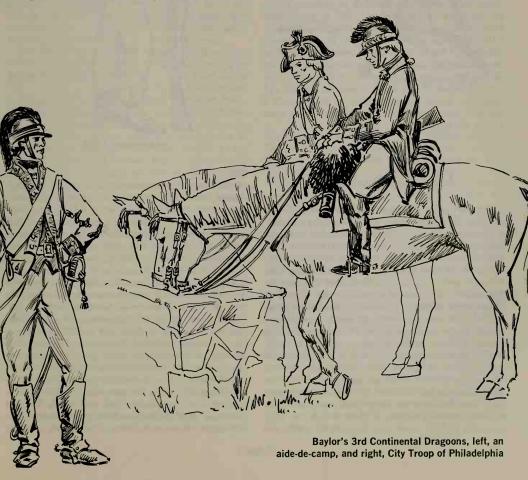
Congress could flout the suggestions of General Washington, but under President Washington the Regular Army at least made a beginning. In 1789, its authorized strength was one regiment of 560 men and a battalion of artillery, 280 strong. As these units were 168 men short, the entire U. S. Army consisted of 672 men.

Even Congressmen could be made to see that this was not an overly large force with which to garrison forts and magazines, and at the same time erect outposts and protect settlers along a wilderness fron-

tier stretching for hundreds of miles. Expeditions against various Indian tribes made necessary the calling out of volunteers and local militia, many of whom promptly deserted, leaving the handful of Regulars to face the hostiles almost alone. So to the one regiment of Regulars was reluctantly added another, only to have most of it vanish in General Arthur St. Clair's disastrous defeat near Fort Wayne on the Wabash (November 4, 1791). There the Kentucky militia (no Dan'l Boones they) fled en masse, throwing the few Regulars into confusion. More than nine hundred dead and wounded were left on the field, in one of the worst defeats at the hands of the redskins on record.

So the Regular Army was enlarged again—though only slightly—but a Militia Act went on the books, calling for the enrollment of every American between the ages of eighteen and forty-five. This was to be managed by the States, with no organization on a national basis—a sure invitation to trouble and disorder.

If ever there was a broken reed, it was the average Militiaman. The lessons of the Revolution had been forgotten, and the legend of the "embattled farmer" had taken firm hold. It had become an article of faith that, when danger threatened, the American had but to take his trusty flintlock off the wall and prestol he was a soldier, and an invincible one, at that. What need for discipline and drill and ordered ranks. They only got good men shot, and everyone knew that a marksman behind a tree was worth three Regulars in the open. So muster-days were a time for jollification, and the whiskey-keg was as standard a piece of equipment as the fife and drum. The officers were



usually on the par with the men—ignorant, arrogant rum-pots, most of them—elected to their commands. Many were local politicians, more interested in ballots than bullets; and in the event of their seeing action, they were likely to direct their companies from behind the nearest tree. There were exceptions, and in the hands of a good commander, Militia units occasionally gave a good account of themselves, but on the whole they were little better than a rabble—and just as reliable.

The real defense of the country rested on the pitifully small number of Regulars. And sad experience was teaching the Regular that the average Militiaman, with whom he was supposed to campaign, wasn't worth a hoot in hell. To the civilian, in turn, the Regular Army stood squarely against everything that he held to be his inalienable rights; his right to do as he chose, go where he pleased when he pleased - above all, his right as a free-born citizen of the United States to recognize no authority other than his own. (The insistence upon these rights by the average American of the early nineteenth century bordered on the pathological, and was often a source of annoyance and/or amusement to visitors to our shores.) To the Army, however, it was more a cause for disgust and alarm, for it was recognized that in the event of a national emergency it was the Militia which must supply the bulk of the forces.

The War of 1812

The Army's worst fears were realized during the War of 1812. The Militia system was shown up as a sham—a snare and a delusion. Some states hardly answered the call for Militiamen, while the governors of Connecticut and Massachusetts refused to order their men out at all. Most of those that did appear under arms behaved badly, beginning with General Stephen Van Rensselaer's disastrous attempt to invade Canada at Queenstown Heights (October 13, 1812). The greatest disgrace was the routing of nearly six thousand Militia and a few Regular recruits by less than two thousand British at Bladensburg (August 24, 1814).

The Regulars performed well at Chippawa and Lundy's Lane, the latter the hardest fought battle of the war, with both sides claiming the victory. Yet their achievements in these and other engagements were overshadowed in the popular imagination by Andrew Jackson's victory at New Orleans in 1815. Actually, Jackson knew only too well the limitations



Infantryman, 1814

of his heterogeneous force—a mixture of Regulars, Militia, volunteers, free Negroes, sailors, and Lafitte's pirates—to dare meet Sir Edward Pakenham's Peninsular veterans in the field. As it happened, the British leader was rash enough to attack Jackson in a position of his own choosing. The resulting defeat (American fire-power was as superior to the British as theirs was to that of the French) cost the British many casualties and Sir Edward his life. It also served to perpetuate the militia-myth, and thus, in the long run, did no great service to the U. S. Army.

But if the Army did not win much glory in the war the Navy did—and a series of brilliant triumphs at sea and on the Great Lakes electrified the whole country. More important, they gave the young service a tradition of victory which the ultimate and inevitable defeat by the world's greatest naval power could not dim. Man for man, there might be little to choose between Yankee Jack and British Tar. But American naval planners and designers saw to it that the ships of the new Navy were models of their

type. No longer would a John Paul Jones be forced to fight in a foreign vessel such as the Bonhomme Richard. Frigates such as the 44-gun United States, Constitution, and President were far superior to any ship of their class affoat. It was the beginning of another American naval tradition - that American vessels of a given class should be more stoutly built and more heavily gunned than any that they were likely to meet. But stouter hulls and heavier guns alone did not account for the smashing defeat which the Americans administered to their British adversaries in the first months of the war. In every instance the accuracy of American gunners was far superior to that of their opponents, turning the gun decks of the British ships into shambles of splintered timbers, overturned cannon, and slaughtered gun crews. And that, too, became a tradition of the Service - that American gunnery, weapons, and equipment should be of the highest order. The men who reduced the great Japanese Navy to a few battered hulks owed much to the sailormen of 1812.

One great step had been taken toward a more efficient force when, in 1802, an act was passed providing for a Corps of Engineers. Among other duties this corps was to be responsible for the founding and maintenance of a military academy "At West Point, in the State of New York." Far more important than the superior educational facilities of the Academy was the effect on the embryo Army of a steady influx of young officers—superbly disciplined, trained to exacting standards, and imbued with a spirit of self-sacrifice, pride of service, and love of country. This spirit has grown with the years, rather than diminished, and as long as it continues to grow and flourish the honor of the Army and of the country are in good hands.

The Academy turned out soldiers, not fighting men -no school can do that. But the Army took them then; and tolerant captains and fatherly sergeants, wise in the ways of war, completed their education. Most of them, that is. Some never could learn the difference between parade ground and class room and the field of battle. These died; and very often the men of their commands died with them. Others went straight from the steep hill above the Hudson into the maelstrom of war, without a chance to learn - and many of them died, too. Those who survived made the professional Army what it was - a tough, tempered blade, obedient to the hand who wielded it. In each of the four major wars, the officers of the Regular Army have been submerged in a flood of men commissioned from civilian life, from the ranks, or from the Officer Candidate Schools. But always



the leadership, and the hard core, has been supplied by the Academy; Academies, for Annapolis is as truly the heart and soul of the Navy as West Point is of the Army.

Necessary as is this stiff armature upon which the great bulk of the fighting services is molded, the amalgamation of service-trained professional and civilian-oriented, emergency-only, citizen-officer is not accomplished without friction and misunderstanding. True rapport between the civilian and the military mind is seldom achieved—and the almost unbridgeable gap between the two is a constant source of danger and weakness.

This is not to decry all those who entered the Services from civil life. A Congressional appointment to a Service Academy does not necessarily fall exclusively upon those Americans in whom burns the flame of military genius. Often the reverse has been true, and the blunders of a West Pointer have been retrieved by the skill and efficiency of a man from a more peaceful profession, whose natural aptitude for war more than made up for his lack of formal training. There are many such men in every land, and when they are discovered and encouraged, their services are above price.

"A Pretty Rough Bunch"

The enlisted men of the U.S. Army of the nineteenth century were, as might be expected, a pretty rough bunch. They came, a good many of them, from conditions almost as hard as those prevailing in the Services. Life in rural America was no bed of roses in those days, and many a country boy found life in an Army post less arduous than the dawn-to-dusk grind of the family farm. Those who enlisted for adventure often found it, for the frontier was steadily pushing westward. Despite the teaching of the history books, and the words of our politicians, our lack of desire for foreign conquest has nothing to do with any inherently noble or righteous qualities of the national character. It just so happened that nature and geography have been exceedingly kind; and whatever the country considered it lacked it was able to acquire with comparatively little fuss. Naturally the rightful inhabitants, Indians and Mexicans, resisted this call of "Manifest Destiny" and the progress of civilization was marked by a series of savage little wars (twenty-two in the 1850s alone).

Tactics straight out of the drill book were of little use in battling the wily red man, but experience, common sense, and a leavening of frontier types white hunters and trappers, or "tame" Indians - enabled the Regulars to compete on almost even terms. The redskin of the rivers and woods of the Midwest was soon replaced as an antagonist by the Plains Indian: and when the tactics of that superb light horseman had been studied and mastered, it was time to learn the mountain and desert warfare of the deadly Apache. It was rugged warfare, and one in which a man's first mistake was often his last. But grim and demanding as the fighting was, it was often no worse than the deadly monotony of life on a frontier post. For the officers, and their long-suffering womenfolk, there was little to ameliorate the loneliness and boredom of existence, in primitive quarters, far from contact with civilization. For the enlisted men there was nothing at all - nothing, that is, except rot-gut liquor, and the blowsy whores who speedily become available around any Army post. In the outlying spots there was not even the dubious consolation of the bedraggled females - only the cheap whiskey. Small wonder that the rate of desertion was high or that the cells were often filled. Many a commander welcomed trouble with the nearby tribesmen; as much to cut



down the number of disgruntled men going "over the hill" (hostiles round a post had the same deterring effect as sharks around an island prison) as for a chance for action and possible advancement.

Trouble in 1846 meant more than a punitive expedition against the aborigines. War with Mexico had been in the offing for some time, and when the illfated Mexican General Mariano Arista crossed the Rio Grande near a place called Palo Alto, the country went joyously to war. As usual, the 50,000 volunteers which President James K. Polk called for were enlisted on a short-term (six months or one year) basis, so that by the time many arrived at their destinations on the Mexican frontier their time of enlistment was nearly up. The Regular Army, meanwhile, was raised to 15,000 men - which sensible move was almost nullified by the President's shameless politicking and favoritism in choices for high command. In spite of this, the war was brilliantly conducted and gallantly won. Our neighbors to the South have never been wanting in courage, and the American victories of Monterrey, Buena Vista, Cerro Gordo, Contreras, Churubusco, Molino del Rey, and Chapultepec did

more honor to our arms than detractors of the Mexicans would have us believe.

The graduates of the Academy distinguished themselves. Declared General Winfield Scott: "I give it as my fixed opinion, that but for our graduated cadets, the war between the United States and Mexico might, and probably would, have lasted some four or five years, with, in its first half, more defeats than victories falling to our share; whereas, in less than two campaigns we conquered a great country and a peace, without the loss of a single battle or skirmish."

Naturally, there was trouble with the volunteers. They behaved as volunteers have always behaved, in accordance with their training and leadership - some fighting like heroes; others running like sheep. At Buena Vista many ran. Others, like the red-shirted 1st Mississippi Rifles, obeyed their wounded Colonel Davis' command to "Stand fast," words which today are the motto of the 155th Infantry, National Guard. (The colonel later won further fame as the President of the Confederate States of America.)

When not in combat the volunteer's behavior was in general very bad. The accounts of their evil doings in Samuel Chamberlain's My Confession are probably not exaggerated. The author, who as a youth enlisted in the 1st U. S. Dragoons and served with them throughout the war, had all the Regular's contempt for the undisciplined volunteer. The conduct of two commands aroused his particular ire, as the following excerpt shows.

"Our little army (Wool's) was rather weakened than strengthened by the two regiments of volunteer cavalry, Colonel Yell's Arkansas and Colonel Humphrey Marshall's Kentucky. The material that these regiments were composed of was excellent-none could be better - for the men possessed fine physiques and strength combined with activity, but they had no discipline, or confidence in their officers . . . Their impatience of all restraint, and egotism made them worse than useless on Picket, while in camp they were a perfect nuisance . . . looking upon the 'greasers' as belonging to the same social class as their negro slaves, they plundered them and ill-treated them, and outraged the women . . . they took no care of their arms-not one Carbine in fifty would go off - and most of their Sabres were rusted in their scabbards. This shameful state of affairs seemed to have no remedy; . . . ex-Governor Yell . . . and ex-Senator Marshall . . . were men of too much importance to take advice, much less orders, from a little Yankee General like Wool."

Murder, rape, robbery, scalpings, and all manner of atrocities were laid at the volunteer's door, and it is with no surprise that we read that ex-Governor Archibald Yell's southern "chivalry" bolted at Buena Vista, leaving their colonel and a few other officers to perish on the Mexican lances.

Fortunately for the honor and credit of the U.S. Army, the conduct of its Regulars was exemplary; demonstrating once more that steadiness and discipline on the battlefield usually goes hand-in-hand with correct behavior to a civilian population.

The 1850s saw the Army, enlarged now by four cavalry regiments, back at its old trade of Indian fighting. Its duties were increasing daily, for the discovery of gold in California in '49 had accelerated the rush West, and the number of frontier forts needed to safeguard the trails had jumped accordingly. More crosscountry trails and wagon trains meant more angry Indians, infuriated at the loss of their hunting grounds and the increasing incursions of whites into their domains. Indians were not the only enemies however, and a sizable expedition had to be mounted (1857) against the Mormons. These gentry, not deeming a plurality of wives sufficient trouble, had challenged the authority of the Federal government. They had also roused the country by their harsh treatment (including several massacres) of immigrant trains attempting to pass through their territory.

The government's show of force was sufficient to resolve the difficulties, but as the decade drew to a close a far greater menace than Indians and Latter-Day Saints loomed on the horizon. Early in the morning of October 18, 1859, a Colonel Robert E. Lee sent his aide, J. E. B. Stuart to demand the surrender of a fierce old fanatic penned in the engine house at Harpers Ferry. From the little town at the junction of the Potomac and the Shenandoah to Charleston Harbor was but a step, and when the Stars and Stripes came fluttering down from battered Sumter, both the nation and the Services found themselves divided.

The Civil War

The long and bloody struggle that followed was a citizen-soldier's war. The total strength of the U. S. Army in 1861 was little over 16,000 officers and men, and the majority of these (183 out of 198 of the line companies) were scattered along the wide frontier. True to their salt, the enlisted men of both Services stood by their colors almost to a man. Out of over 15,000 enlisted men of the Regular Army only twenty-



Civil War Zouave (5th New York) and Cavalryman. More important to the ever-growing Federal Cavalry arm, than the saber and Colt revolver was the deadly Spencer repeating carbine. Only 39 inches long, its tubular magazine held seven rounds of rim-fire ammunition, made it the most effective firearm of the war

six went south. Of 1080 Army officers, 313 handed in their resignations.

Neither side foresaw a prolonged conflict, the general public of both North and South believing that the other side would give way in rout at the first onset. In the Confederacy, 100,000 one-year volunteers were enrolled, while in the North the President called for 75,000 Militia, and increased the Regular Army by nine infantry regiments, one of artillery, and one of cavalry. The old law, which limited the time of enlistment of State Militia called into Federal service to three months, was still in effect. As a result the raising of the new armies was left up to the individual states. There was no uniformity of clothing, arms, or length of service, and the commanding officers were appointees of the governors of their respective states. The lower grade officers were usually elected.

As might be expected, there were some very bad commanders. Political patronage is a poor method of picking efficient soldiers. But as the war went on there was a great weeding out of incompetents, the crucial test of battle soon separating the men from the boys. Where patriotism was allowed to override political expediency the governor's choices were often excellent. For reasons best known to itself, the Federal government was slow to give employment to many ex-Army officers who offered their services, and the governors of many states took advantage of this to offer them commissions as volunteers. Colonel Dupuy points out, in The Compact History of the U. S. Army, that the Adjutant General's Department has still not gotten around to answering a letter from an ex-captain named Grant. Fortunately the Governor of Illinois made him a colonel, thus giving him the opportunity to trade his position in a leather goods store for one in the White House.

Many requests by governors for Regular Army officers were refused by the War Department, although it would have appeared only common sense to supply as many Regulars as possible to lead the great masses of volunteers which shortly began to pour in. Captain Philip H. Sheridan, 13th Infantry, was lucky in being permitted to accept a commission as colonel of the 2nd Michigan Volunteer Cavalry. Some, like ex-Captain George B. McClellan, who had done well for themselves in civilian life ("Little Mac" was president of a railroad) were straightway commissioned major generals of volunteers, or at least brigadiers (although of seventy-one brigadiers commissioned by September 1861, twenty-four had had no previous experience at all).

The influence of West Point was strong in both

camps. In fifty-five out of sixty important battles, West Pointers were in command on both sides, and on one side in the remaining five.

The citizen-soldier of the Civil War was a very special breed of soldier. The country was still young, raw, unsophisticated, and unspoiled; and alive with a tremendous vitality and excitement. The volunteer was a product of that era, and brought to war all the drive, inventiveness, restlessness, and turbulence that was his heritage. Like the country, the war was also big and new, too big to be controlled by little old men in dusty offices. Not that some of them did not try. But a nation in arms was too much for them, and the natural genius of the people spilled over in a flood of new techniques, inventions, and ideas. And for every new idea, there was somebody ready to try it—and if it worked, to apply it to one purpose—winning the war.

Mighty new cannon roared, new breechloading magazine rifles cracked, while vital messages hummed over more miles of telegraph wires, and troop trains rattled over more miles of track than ever served armies before. Artillerymen telegraphed fire data from balloons, while gray-clad columns detoured widely to avoid the spying eyes of aerial observers. On the seas, other lookouts scanned the water anxiously for signs of a new and terrible underwater menace, or kept sharp watch for the low dark hulk which might betoken an armored ram.

The troops and the ideas might be new, but the old truths still held. Discipline and training made a soldier, not fancy slogans and equally fancy uniforms. Experience could do it, but it would take time and must be paid for in blood and tears. And time neither side had, and so at first raw recruits, with no veterans in their ranks to steady them, were thrown into battles made deadlier than any before by the skillful use of the rifled musket. Some such regiments ran, others stayed and fought, depending on the circumstances. None were braver than others. Some were just luckier. The more fortunate ones had officers who radiated a little more confidence, or had a few hours to become acclimated to the horrid sights and sounds of war before meeting the enemy face to face. Or perhaps they had just had a chance to start the day off with a good meal. And the ones who ran one day might stay and fight the next. The Spaniards have a saying, "He was a brave man that day," and it is a true one. There are few men indeed who are consistently brave. Courage can run out, like water out of a canteen, and must be replenished. There is nothing shameful, or new, about this. Even Hector and Achilles had their off-days. Most heroes are ordinary men

who do what they do out of some ordinary emotion -rage, desperation, love, hate-even shame or fear. And often, when the moment of exaltation is passed, they are appalled at what they have done and at the risks they have taken.

This is the true function of discipline. If all men had, every minute of their lives, the cunning, ferocity, and complete lack of fear of a wounded African buffalo, then discipline in battle would be of less consequence. But human courage is not the absence of fear, it is the conquering of it.

There may be some men who are born without fear. If so, they are few and far between. Also, there is something radically wrong with them. For fear is as natural and as necessary to man as four fingers and an opposing thumb. It is a built-in part of his otherwise weak defenses. Without it he would never have survived to grasp club and strike fire. In comparison with other predators he had neither strength, speed, sense of smell or hearing, nor any natural weapons. All he has is fear - and intelligence.

So in time of great danger, when the trained soldier's natural impulse is to run, the disciplined part of his brain takes over. It may flash pictures of disgrace if he runs - or reward and glory if he does not. Fear of the jeers and contempt of his comrades, love of a cause, hatred of the enemy, belief in immortality, dread of his superiors, pride in self or corps any or all of these may influence him. And also crowding in are other senses-the roar of battle, the whistle of bullets, the screams of the dying, the knowledge of what flying splinters, cold steel, or searing flame can do to flesh and bonc. But if he has been properly conditioned, if the absolute necessity of performing certain functions, regardless of all else, has been firmly imprinted in his mind, then the impulses which tell him he must stay outweigh those which urge him to go.

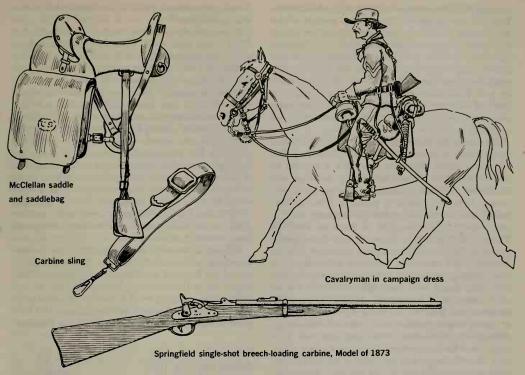
The truly brave man is one who, though trembling with fear, performs his duty without hesitation.

Once the volunteer was seasoned; once he had learned to look out for himself in camp; to take care of his musket and his feet and his stomach; to march far and travel light; learned when to duck and when to dig; when to fight and when to retire; and learned to trust his company mates, his NCOs, and his officers; then he was well on his way to becoming a soldier. And the veteran of the Civil War was a very good soldier indeed. His discipline was tempered with common sense. He could perform his close-order evolutions and he could skirmish like an Indian. His seemingly carefree attitude was the despair of many forcign military observers, yet on occasion he could dress ranks and, with head bent as if better to weather the leaden hail, march forward in ordered lines into the fiercest fire. His artillery was handled with speed and precision, and his musketry was the most devastating in the world. He was an accomplished scrounger and could live off the land as well as any soldier who ever lived. His charges were as gallant as any in history, yet when occasion demanded he could construct his improvised field entrenchments with the skill of an engineer and the speed of a badger. And if there was a call for any duty out of the ordinary, any tasks which demanded an unusual display of ingenuity, the ranks were always ready to respond.

The closing scenes of the great struggle brought vividly to the fore the closeness of the band which the war had so sharply divided. Officers, in blue and gray, many of them classmates or erstwhile comrades of regimental mess or frontier garrison, met quietly in gentlemanly fashion to discuss terms of peace. There was little rancor, no great fanfare which might embarrass a gallant foe. More perhaps the air of a group of doctors meeting to discuss dispassionately an interesting operation. It was over and done with, and now it was time to get on with other work.

The war's end found the United States with a splendid army, second to none in the world. Four years of war had tempered it, blooded it, and honed it to a keen cutting edge. Its musketry was deadly, its artillery both numerous and efficient, and its horsemen, armed with the lethal seven-shot Spencer carbine, had revolutionized cavalry tactics. It was justly admired by European military men, and its campaigns would soon become required study of foreign staff colleges. But it was a civilian army, and its work was done. Politician and soldier alike were impatient to disband it and before the smoke of the last battles had barely time to clear away, the business of dismemberment began. In a little while the great Army of the Republic was only a memory.

From the standpoint of the student of military history it was a pity that the U. S. Army, at the full peak of its efficiency, could not have crossed swords with that of a first-class European power. For a while, it almost looked as if it might. In 1866 Sheridan, with 50,000 veterans, stood poised on the Rio Grande, to give point to the government's demand that France remove her troops from Mexico. But Cherbourg was a long way from Vera Cruz, there were the American ironclads to reckon with, and Sheridan's reputation and that of his men were well known abroad. So France withdrew, and we shall never know how the Legion, of Camerone fame, might have fared against the sharpshooters of Gettysburg and the Wilderness.



The Indian Fighting Army

Throughout the war the fighting on the frontier had never ceased, and with the end of the Confederacy and the resumption of the great migration to the West, the Regular Army's task was doubled. Naturally, it was cut far below the safety limit, and, just as naturally, the false economy proved in the end vastly more expensive. Army strength in 1866 was around 57,000 which in 1869 was cut to some 39,000 officers and men, with a five-year enlistment. In 1873 further cuts reduced the Army to 25,000—this to guard an area which stretched from Texas to the Canadian border, and from the Missouri to the Pacific. Once more the Army was spread desperately thin. Garrison duty in the East and occupation of the South (not ended until 1877) employed many

units, and there was hardly a year between 1865 and 1891 without at least one campaign.

When the last shot rang out at Wounded Knee, South Dakota, on December 29, 1890, there came an end to more than a hundred years of Indian fighting. A "Century of Dishonor" it has been called, and no one can deny the harsh facts of the shameful tale of treachery, ill treatment, robbery, and murder which characterized the dealings of the U.S. government with the red man.

But little blame for this sorry chapter in American history can be laid at the Army's door. The Department of the Interior, with the notorious Bureau of Indian Affairs, must take a large share. The Army did not make the laws, it only enforced them. And was not always too happy about it. General George Crook once said ". . . the hardest thing is to go and fight those whom you know are in the right." Many of the rank and file also were convinced that the Indians were often driven to open warfare by mistreatment and despair. "We thought they [the Apaches] were not getting an even break—and they weren't," wrote

a sergeant, and numerous other letters and comments bear out the statement. The broken treaties of the government, the thievery of Indian agents, the crimes of drunken cowboys and murderous scalp-hunters, and the misdeeds of whiskey-peddling gun-selling traders might spark an outbreak; but once on the warpath it was the Army's job to bring the braves to heel. From 1865 on, the Army fought over nine hundred separate engagements, some of them minor skirmishes but all taking their toll in dead and wounded.

The Indian-fighting Army has become a legend, and, through motion pictures and TV, a familiar one. The veteran of those days (he was often a veteran of the Civil War, too) was a hard-bitten character, and as efficient and deadly a fighting man as any in our history. However, what with casualties from the battlefield and disease, desertions (a Secretary of War once reported that one-third of the men recruited between 1867 and 1891 deserted), and the termination of enlistments, veterans were often few and far between. Prior to the '80s there was little attempt at basic training for recruits and they were expected to learn their duties from their fellow soldiers while on active duty. Also, contrary to popular belief, little attention was paid to marksmanship until the '70s. At times target practice was curtailed because of shortage of ammunition. One lieutenant who protested that his inexperienced gun crews had never fired their Gatlings, was told that if he held target practice he would have to pay for the ammunition.

A footnote in Don Rickey's Forty Miles a Day on Beans and Hay states that seventy-eight replacements for the 7th Cavalry went on Custer's last campaign about a month after enlistment, including a week of waiting at a depot. None of these men had been trained in horsemanship, and none had received any instruction in the use of their arms. Several died at the Little Big Horn. A surgeon who was in the column which relieved the survivors of the Custer fight wrote, "Cavalry-men . . . as a general thing are about as well fittled to travel through a hostile country as puling infants . . ."

So the Army which won the West was not made up entirely of battle-scarred veterans. But constant campaigning and the hard life of the frontier soon whipped the rawest recruit into shape. If he survived arrow, bullet, and bug, and if harsh discipline, monotony, poor food, or the news of a rich new "strike" had not driven him to desert, then he became a soldier any Army could be proud of. Lord Wolseley, after inspecting the American Army in the late '80s, said that, man for man, it was the best in the world.

Coming from the C.-in-C. of the British Army, that was praise indeed.

It was also the only kind of Army that the United States could have used. Volunteers would not have served the purpose. They will put up with hardship and danger, but only for a cause, a crusade; for Liberty, or Preserving the Union, or Making the World Safe for Democracy. These are the issues for which men will leave their homes and go off to war. But the citizen-soldier will not spend years in some Godforsaken spot on a lonely frontier - roasting in summer and freezing in winter-with nothing to break the monotony but the chance of wounds or death got fighting a handful of lousy savages in an endless war of ambush and murder, in which there is little credit and little glory. In any case, most short-term soldiers would have been dead before they learned the ropes -killed through carelessness or bad water or sunstroke, or one of the numerous other things that greenhorns on the frontier died of.

For this is work for the professional. The Romans knew this, and raised the Legions. The British knew it, and the bones of their Regulars lie scattered from Capetown to the Khyber. The French knew it, and when there was dirty work to be done in some backwater of Empire, they sent the Legionaires. The little professional Army of the Washita and the Rosebud,



of the Clearwater and Wounded Knee was the closest thing to the Legions of old that the U.S. has ever had. The time will come when we shall need such Legions again.

Discipline was hard in that Army. While men from all walks of life could be found in the ranks, there were many who were rough characters; Bowery toughs, gamblers, petty crooks, and border riffraff who needed a firm hand. This hand was often provided, literally, by the corporal or sergeant, who usually elected to administer a good beating behind the barracks, rather than to prefer charges. But there were punishments galore, for every conceivable offense and their frequency and severity depended to a great extent on the type of officer in command. Some, embittered and despairing of promotion - men who had held high rank during the Civil War, only to revert to that of lieutenant or captain in the Regular Army list-proved excessively harsh disciplinarians. (It was not until 1890 that the system of regimental promotion was replaced by advancement by seniority in each branch. Under the former, a newly joined lieutenant might find himself, by virtue of some military disaster, a captain within a month; while in another regiment, one many years his senior might serve until he was gray before getting his captaincy.) Next to liquor, tyrannical superiors was the reason most often given for desertion.

On other posts, discipline might be a little more lax. But it was a spit and polish army, nonetheless. Rough and ready it might be in the field, but parades and guard mounts, even at small posts, called for dress blues and, if the post boasted one, a band. Nor was there any nonsense about equality between officers and enlisted men - or enlisted men and NCOs. Unlike many foreign armies, however, there were no class distinctions. A poor man's son could win an appointment to the Academy as easily as any other. And once graduated, he was, in relation to the enlisted man, a God - omnipotent and awe-inspiring ruling the millionaire's son and pauper's brat alike. On campaign, especially in small units, a certain informality was accepted. But once back on post, the utmost in military punctillio was demanded - and given, without question. Some men were galled by this - and by the endless fatigues and the constant insistence on rigid conformity. Others accepted it, seeing beneath the petty annoyances and harassments of Army life the underlying good. Wrote a sergeant: "Those who did not fit went over the hill-deserted. In most cases they were men whom the army could well do without."

If many of the men grew disgusted with the Army,

many officers grew equally disgusted with the government and the public in general. They felt, and rightly, that their sacrifices and services were unappreciated, and that their efforts to pacify the West were not supported. In truth, acts of the government, often dictated by self-interest or ignorance, were responsible for the endless chain of outbreaks and massacres, which the Army was then called on to suppress and punish. Their distrust of the politicians was not lessened when the 54th Congress adjourned in 1876 - the year of the Rosebud and Little Big Horn without passing the Appropriations Act for the following fiscal year. For the Army and Navy that meant no pay until November 1877! The enlisted men at least had their rations, but the officers and their families, for all Congress cared, could have starved to death.

There was understandably, therefore, an increasing tendency on the part of the Services to withdraw unto themselves. Neglected, starved for funds, and often, it appeared, betrayed by the civil authorities, the Army retreated into a protective shell. Clannish and proud, it gloried in its penury; compensating itself for lack of worldly goods by a fierce dedication, and an equally fierce contempt for those not so dedicated. This contempt was not confined to the officer corps; and there were few enlisted men, rigorous as might be their duty, who did not feel superior to the civilian. Even when circumstances forced them to succumb to the lure of the golden opportunities of civilian life, they remained somehow apart, marked forever by the bonds of their service.

The War Department, the liaison between the government and the field Army, had meanwhile become increasingly out of touch with both. To quote Dupuy: "Officers lucky—or unlucky enough—to be detailed to the various staff departments in the War Department remained indefinitely in their own little cubbyholes, for there was then no time-restriction on such service. There, out of touch with the Line and completely unrealistic, untrammeled by any military policy or guidance, they played with paper work, a General Staff in name only. Implementation of national objectives did not concern them."

This was a dangerous situation, for the United States—rich, cocky, full of vim and vigor—was about to become a world power. The course would be a new and a strange one for a country whose policy for almost a century and a quarter had been one of magnificent isolation. It was to lead to San Juan Hill and Manila Bay; Château-Thierry and the Argonne; Bataan, Algeria, and the bridge at Remagen; to Pusan and the Yalu; and to the rice paddies of Vietnam.

Its cost in blood and treasure would be fantastic nor is the end in sight. For once embarked on such a course there is no turning back.

The Spanish-American War

The blast which shattered the Maine touched off an explosion of long pent-up nationalism. North and South stood once more united, and a great wave of patriotism swept the country. The first call for 125,000 volunteers brought a mighty surge of Americans to the colors, to be followed shortly by 75,000 more. The 30,000-man Regular Army was more than doubled by adding a third battalion to each regiment and by increasing the strengths of each company.

The War Department in 1898 was no more able to cope with this sudden rush to arms than it had been in 1861. It had no plans, no maps, no reserve of arms



Infantryman, 1898, campaign uniform

or other supplies, no anything. Many regiments of Militia (now usually called the National Guard) had volunteered as one man, and these and the others pouring in had to be tented, fed, uniformed, armed, trained, and ultimately transported.

The Krag-Jorgensen magazine rifle, which had been issued to the Army in 1892, was in short supply, so that the volunteers had to be content with the single-shot .45-calibre Springfield, first issued in 1873. This was a fine weapon, but of low velocity, and the smoke from its black powder charge marked the position of our men for the Spanish sharpshooters. The artillery also used black powder, although most foreign armies had switched to smokeless powder years before.

In contrast to the confusion reigning in Army circles, the Navy had modern tools, knew what it had to do, and did it. War was declared on April 25, 1898, and on May 1 Admiral George Dewey destroyed the Spanish squadron at Manila. It was a victory in the tradition of those of 1812. In comparison with that of the Spaniards, the shooting by the American ships was deadly. Not an American was killed, not a ship disabled. But there were Spanish forces ashore, and

that meant a land campaign.

Naturally, no one in the War Department knew anything about the Philippines, but the Navy held the seas, and an expedition, two regiments of volunteers and six companies of Regulars, set sail to win an empire in the East. Meanwhile the main Spanish squadron had been lying at the Cape Verde Islands. They sailed West, under Admiral Pascual Cervera, on April 29, and while it was obvious to naval men that they must coal in some Spanish-held port in the Caribbean, the mystery of their exact destination and possible intentions caused a near panic along the Eastern seaboard. Had the civil authorities had their way, the whole U. S. Fleet would have been split up and relegated to guard duty of various ports, whose inhabitants clamored for protection. It was bad enough as it was. Nervous civilians (some New Yorkers moved their silverware to their country places to save it from the Spaniards) put enough pressure on the Navy Department to have the four best and fastest vessels in the Navy held at Hampton Roads as a "Flying Squadron." Two battleships, a cruiser, and a hodge-podge of old slow vessels of doubtful fighting value went south, to look for Cervera and to blockade Cuba. A tall order - but the Navy's luck held. Cervera was sighted at Curação. The coastal cities were safe, so the Flying Squadron flew south too, and on May 29, the Spaniards were reported safely bottled up in Santiago harbor.

Now it was the soldier's turn. The seaward de-

fenses of Santiago were too strong to be forced. So the Army must go in and help winkle the Dons out of their shell.

From a staff officer's point of view the campaign was not a particularly edifying spectacle. There were mistakes in plenty, beginning with the choice of a commander so stout and so gouty that instead of riding, he usually drove a buckboard, bent beneath his weight, and spent much of his time in a hammock. The landing arrangements were chaotie, and would have driven a modern beach-master to suicide. Transports were civilian run. "The Seneca," wrote C. J. Post, private in the 71st Infantry, "was the most shameless swindle ever finagled into a government contract. I doubt whether there has ever been bred a more rapacious set of scroundels than those responsible for the arrangements of our troop transports." The masters chose their own distances from the beaches selected for a landing and some troops had a long ride in ships boats, towed by Navy steam launches. The horses and mules were driven overboard, sometimes half a mile from shore, and despite familiar bugle calls from the beach and aid from teamsters in boats, many were drowned.

The troops, both Regulars and Volunteers, behaved with great gallantry. Leadership on the company level was excellent, and there were few panics or disasters. Unnecessary losses were caused through inexperience, but the Volunteers more than made up for their ignorance by their eagerness and dash. Despite a mix-up of troops, jammed in narrow trails under heavy fire—and some bad generalship—the 1st Volunteer Cavalry, better known as the "Rough Riders," stormed Kettle Hill, along with the Negro 1oth U. S. Cavalry, while the 6th and 16th Regular Infantry charged up San Juan, the key to Santiago.

That was on July 1. Two days later, Cervera came out, and in a few hours his ships were sunk or captured. American naval losses were heavier this time—one killed!

On July 17 the rotund Major General William R. Shafter received the surrender of Santiago, but a deadlier foe than shrapnel or bullet had already laid half the American Army low. Spoiled food, putrid water, heat, mosquitoes—all took their toll. For all the shouting, shooting, and heroics, there were only 385 killed in action in that war, but over five thousand died of wounds and disease. Most volunteers had no idea of sanitation, and their death rate was accordingly high. In contrast, the Marines who took and occupied Guantánamo were better supplied and their health carefully watched by officers who nearly all had had experience in tropical countries. "Since the battalion left

for Cuba, it has not lost a man through sickness," wrote a Marine officer. Conditions around Santiago may have been a little more rugged, but the results of health discipline and care by Marine officers who knew their business proved that conditions in the Army were unbelievably bad. Main articles of diet were hard tack, sowbelly (euphemistically termed "bacon" by the Army), and canned "roast beef" ground-up cow, bone, gristle, cartilage, and gullet, with stringy fibers scattered through a semi-liquid mess - according to Private Post. He helped load some of it in Florida, and the eases showed it had been originally consigned to the Japanese Army, for use (perhaps as a weapon?) in the war with China in 1894. Of sowbelly he wrote: "Sowbelly is exactly what its name implies, the belly of a very adult lady pig, faucets and all. It comes about two or three inches in thickness . . . on one side is the meat; on the other, the leather. And no one but an old Army sergeant or a leather fancier can tell one from the other. However it makes but little difference, since one side is quite as nourishing as the other and both are equally tasty." Coffee was usually issued in the bean, unroasted. Blackened in a skillet, it was then pounded with rocks or rifle butts. The geniuses in the War Department who thought that pulverized hard tack, fried in rancid sowbelly fat, was suitable fare for the tropics had little knowledge of dietetics.

Men can usually survive the vilest food, if it is not actually contaminated. Polluted water is something else again. Dysentery, typhoid, and cholera are some of the ills attributed to it—but men half-mad with thirst are likely to drink from any source, however foul. Only the strictest discipline, imposed from within and without, coupled with a thorough knowledge of the dangers, will suffice to keep troops from doing so. Such water could be purified by boiling but this was small comfort to a soldier, dehydrated by a tropical sun, with neither means nor opportunity at hand. Many drank—many died.

But, all in all, it was a very satisfactory little war. The Army could be proud of its troops—if not of its generalship or organization—while the Navy had wiped two Spanish squadrons off the map at the cost of a few shell holes, nine men wounded, and one dead. And much had been learned.

The "embalmed beef" raised such a stink, in both senses of the word, that a Congressional Committee investigated – found the bureauerats of the War Department inefficient and incapable – and as a result Secretary of War Russell A. Alger resigned at the request of President McKinley. In 1900, under the new Secretary of War, Elihu Root, a War College was

founded and, in 1903, a much needed General Staff. In future wars the American fighting man would be armed and equipped as well or better than any other. His medical system (thanks to men like Majors Walter Reed and William C. Gorgas), and services of supply would become marvels of efficiency. He would, in time, become the best-paid, best-clothed, and best-fed soldier in the world.

The Navy had had a lesson or two, also. It could be justly proud of the epic run of the battleship Oregon, from San Francisco to Key West, but there was obvious need for a shorter route than that around Cape Horn. It could also be proud of the behavior of the numerous recruits—many of them lads born far rom the sight and sound of ocean (one neophyte is aid to have complained to his captain that "the fat nan in the cellar wants me to sleep in a bag").

But while journalists raved over the devastating efects of American gunnery, the Navy decided that here had been far too many splashes and not nearly nough holes; at Santiago—only 1.3 per cent effective uits, in fact. This was not good enough (in 1899, I.M.S. Scylla scored 80 per cent with her six-inch uns in her yearly record practice). Prodded by Theodore Roosevelt and his protégé, gunnery enthusist Lieutenant William S. Sims, there began the which has made the U. S. Fleet the envy of other textiles.

On the other side of the world, our little brown prothers in the Philippines decided that changing masers was not sufficient. They wanted independence a dirty word in those days, unless you happened to be white) and soon American columns were pushing their way through the cogon grass and singing a long about "Civilize 'em with a Krag." Under men like General Arthur MacArthur they civilized them with other things, too — hospitals and schools, public works and courthouses—forging a link which was to hold tirm over the years (and finally saw U. S. Regulars and Philippine Army units battling side by side on Bataan).

The American soldier of pre-World War I was but ittle changed from the Indian-fighting Army man of he '80s and '90s. He was, perhaps, a little better educated and unquestionably better housed and fed. Discipline was still rigid and there was as much spit and solish as ever, but there were more recreational and aducational facilities and the post exchange, first established in 1895, was a great improvement over the outler (vanished as of 1866) and the post trader. Both of these gentry had been in it for what they could get, and as a rule they got plenty. The PX today, as most

Americans know, is not only well stocked but is the envy of bargain-hunting civilians.

New weapons and techniques demanded more from both soldier and sailor – but the character of the whole country was changing – and the average American was well able to cope with the new gadgetry. Quick-firing field guns replaced the old black powder antiques, and Maxims, Colts, and Benét-Merciés supplanted the Gatlings which had sprayed the Spanish trenches on San Juan. The Krag-Jorgensen had given way to the Springfield Model 1903 – a lovely rifle and perhaps the most accurate service weapon ever made. And American marksmanship was excellent, an excellence which would wreak havoe in the field-gray ranks in the next decade.

More important, perhaps, were the changes in the militia system, now universally known as the National Guard. These units were (as of January 1903) to have the same organization, discipline, and armament as the Regular Army. Regular officers were detailed as instructors, and drill and instruction periods were to be held twenty-four times a year. Federal service was still limited to nine months but the day of the half-drilled, half-sozzled militiaman was over.

The American Expeditionary Force

The war which signaled the destruction of the old Europe absorbed the interest of forward-thinking Americans and as it became more and more obvious that the United States might be involved, steps were taken to strengthen the Armed Forces. The National Defense Act of 1916 provided for the organization of the Army into three groups: the Regular Army, the organized Reserves, and the National Guard. To provide for the Officers Reserve Corps (part of the organized Reserve) there was the Reserve Officers Training Corps - military units of various educational institutions whose instructions met War Department standards. The Regular Army was increased to 175,000. The Navy, meanwhile, was becoming a force to be reckoned with. In 1916 there were fourteen dreadnoughts, nineteen pre-dreadnoughts, and twelve armored cruisers, plus a number of light cruisers, destroyers, submarines, and auxiliaries. Although the armored vessels were to have no chance to prove their mettle (the High Seas Fleet had made its bid for power at Jutland in 1916 and been battered back to port), the light units joined the anti-submarine campaign.

The call to arms in April 1917 saw the Army submerged in a sea of volunteers and draftees. The Selective Service Act, passed some six weeks after war was declared, was a vast improvement over the conscriptions of 1863. There were no provisions for substitutes in this new law—a rich man could not buy himself or his sons immunity by purchasing the services of a hireling. If he was hale and hearty, he went—rich and poor alike. The speed with which the act was passed assured that volunteer and Selective Service men were taken into the Army at approximately the same time. This avoided the situation which had prevailed in England, where the volunteers—the most combative and eager of the citizenry—went first, leaving the least willing to fill the ranks later.

The task confronting the government was staggering. Young Americans were pouring in by the tens of thousands (there would ultimately be over 4,000,000) and the work of examining, clothing, feeding, tenting, arming, equipping, training, and transporting them taxed to the utmost the efforts of departments accustomed to dealing with the peacetime Services. The single problem of providing the new armies with



Infantryman, World War I

weapons was serious enough. Springfield rifles on hand numbered less than 300,000; there were about 1100 machine guns of various types - none interchangeable - and some 400 field guns. Of heavy artillery, tanks, and planes there were none, not even grenades or trench mortars. Fortunately the country had a sizable munitions industry already going full blast, but the tooling required to produce weapons of American design could not be accomplished in time to equip the U.S. forces before the war's end. Consequently, much equipment, guns, tanks, and planes were borrowed from the French or British. Not the least of the problems was that of transporting millions of tons of supplies and hundreds of thousands of men across the Atlantic. Despite the German U-boat campaign, this was done without the loss of a single eastbound troopship - a tribute to the men of the U.S. and British fleets.

The build-up of the American forces began with a trickle and swelled to a flood. By the end of hostilities over 2,000,000 Americans were in France. Peak month was July 1918 when more than 300,000 landed. Early arrivals went into training behind the lines, and later were assigned to Allied commands in quiet sectors. General John J. Pershing was adamant in refusing to allow American troops to be used piecemeal as replacements in shattered French and British divisions. The U. S. Army was to fight as a unit. However, Ludendorff's mighty spring offensive made it necessary to throw those divisions considered sufficiently trained into the line, under French Corps Command, and it was thus that the men of the A.E.F. first met the German Army in all-out battle.

The reactions of the new arrivals to their baptism of fire had been narrowly watched by friend and foe alike. The results were impressive. Despite "maneuvers" on the Mexican border in 1916—thoughtfully provided by Pancho Villa—the vast majority of troops, Regulars, National Guard, or National Service, had never seen action of any kind. They were green, but they were willing. They went into battle with an eagerness not seen since the Regulars and enthusiastic volunteers of the European armies had perished in the frontier battles, at Ypres, and along the Marne and Aisne.

A German officer, after examining prisoners from the 2nd Division, taken in the Belleau Wood fighting, wrote of the American replacements that they lacked only training to make them worthy opponents. "The spirit of the troops is fresh, and one of careless confidence."

It was a wonderful Army, the A.E.F., making up with superb courage, dash, and energy whatever it

lacked in experience. There was little to choose between divisions. The Regulars might look down on the Guardsmen as "holiday soldiers" but what Laurence Stallings wrote in his The Doughboys of the 26th (Yankee) Division might have applied to any National Guard outfit. "These guardsmen did not care a damn about the Regular Army. They held themselves better men than the catch-all Regulars of the peacetime Army. Officers knew all their men, where they lived, had talked with their mothers. They had a fierce loyalty, and when they were elected to an officer's rank, even the many who had stooped to the chicanery of militia politics to gain a commission, set about, conscience-stricken, to make officers of themselves . . ." And if the National Guard considered themselves better than the draftees, these, not one whit abashed, countered with the taunt of "Draft Dodgers." For another thing, none, Regular, Guardsmen, or volunteer, had any training in the new weapons and tactics developed since 1914. All had to learn new techniques of war together.

A writer can only sense, from the study of as many records and sources as possible, the feel of the tone, the spirit, of the fighting men of an era. With all due credit to the GIs of World War II, I doubt if the collective spirit of the citizen-armies of that struggle ever matched the joyous adventurism of the Doughboys of 1917–18. Perhaps Americans, too, had reached that point in their national development where they were still primitive enough to enjoy fighting, while civilized enough to utilize all the mechanisms of modern warfare. Whatever the reason, in action after action they threw themselves into battle with a fine disregard for orthodox methods and personal safety.

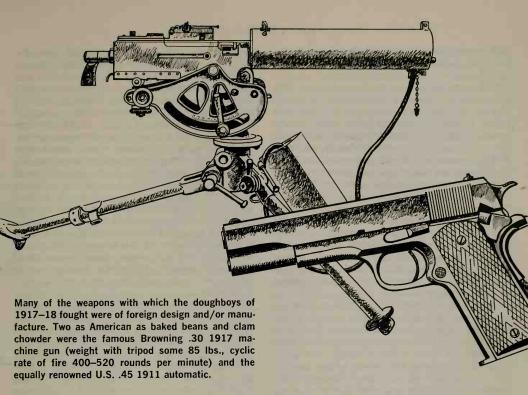
It was an ardor which time and the cumulative shock of repeated, seemingly senseless, losses would ultimately have dulled - just as it had been dulled in Frenchman, Briton, and German. Those battered gladiators, who had been locked in a death struggle for almost four years, were by now weaving on their feet - wounded almost to the death. There was plenty of fight left in the British, whose choice combat troops included the rowdy devil-may-care Australians and the Canadians, but accounts of Franco-American operations leave one with the definite impression that the French had about come to the end of the road. Time and again American advances had been imperiled when French divisions attacking on the flanks had failed to make headway; or had retired (more than once without troubling to notify their Allies). French-ancestored Marine General John Archer Lejeune told Headquarters after the Mont Blanc fighting that he would resign his commission rather than liaison with the French again. In justice to the fighting men of that nation it should be said that at that date (October 2–10) the poilus held 244 miles of front as compared to 199 for U.S., British, and Belgian troops combined, while their losses for July to November 11 amount to 531,000—more than twice the total U.S. casualties for the whole war.

There was much nonsense written after 1918 about how America won the war. A glance at the casualty figures alone shows the stupidity of that statement. But there is no doubt that the impact, both moral and physical, of the hundreds of thousands of eager, husky young men pouring across the Atlantic in a seemingly never-ending stream was a deciding factor—bringing hope to one side and despair to the other. Grave as was the threat posed by the German offensives of 1918, there was a definite feeling that the German Army had played its last card—and lost. Final victory was in sight, although it must be won foot by bloody foot, against a stubborn and well-prepared enemy.

Actual combat strength of the A.E.F. rose from 162,000 in March, 1918 to 1,000,000 in September. In January 1918, American troops held six miles of front out of a total of 468 miles. By the end of August they held 90 miles—three more than the British—and in October, American frontage reached a peak of 101 miles.

American units were much larger in proportion to those of other armies. By 1918, British divisions had shrunk to an average of 11,800; French to 11,400, and Germans to 12,300. An American division, on the other hand, contained an average of 25,500. American infantry companies were 250 strong, with a captain and HQ detachment, and were made up of four platoons. Each platoon had seven eight-man squads, with a platoon sergeant and a lieutenant. There were four companies in a battalion, under a major; and three battalions and a machine-gun company in a regiment, under a colonel. There were two infantry regiments and a machine-gun battalion in a brigade, and two brigades and another machine-gun battalion made up the combat force of a division. This was supported by a brigade of artillery (two regiments of 75s and one of 155s) and the usual retinue of Signal Corps, Engineers, Medics, Ordnance, Quartermaster, etc.

The troops were armed with a collection of Allied weapons. These included unwieldy French Hotchkiss machine guns and the Chauchat 8-mm Machine Rifle (which has been called "one of the most poorly constructed weapons ever developed") the British Stokes mortars—ancestors of the modern mortars—and Mills bombs (hand grenades). The well-known BAR was



not in active service until September 1918 — while the Browning Machine Gun, Model 1917, was produced too late to be of use in World War I (only four seeing service). Light artillery was mostly French 75s, with their 155s supplying long-range fire (only twenty-four cannon used in action by the A.E.F. were of American manufacture). Armor was nearly all French—Baby Renaults, with their distinctive copulas and "tails"; 15-ton Schneiders, with one 75-mm; and, occasionally, heavy British models mounting two 6-pounders and machine guns.

The fighter planes were mostly Nieuports, Spads, or Sopwith Camels. The two-seater day bombers and observation planes were usually DH-4s, Bréguets, or Salmson's. Many Americans had flown with the R.F.C. or the French—the famous Lafayette Escadrille, first formed in April 1916, being adopted into the U. S. Air Service in February 1918, as the 103rd Squadron.

The first American squadron to go into active service was the 94th Aero Squadron, on April 14, 1918, on which occasion two German planes were shot down. An early exploit of the first bombing squadron did not end so happily. An entire flight of Bréguets of Squadron 96, U.S.A.S. under Major Harry Brown, lost

over the clouds, mistook a German city for a French, and landed at Coblenz. Captured: six planes, eleven lieutenants, and the unfortunate major! (Mistaking aerodromes was no uncommon thing in those days. A straying R.F.C. pilot landed one of the first, and very hush-hush, Handley-Page bombers on the German drome at Laon.)

In April 1917, America had no combat planes, nor did any of American design see active service. But the Curtis J-N-4, the famous "Jenny" (top speed, 75 mph) was used to train hundreds of pilots. Over six thousand were built before the Armistice, and American-built DH4s saw much service. A historic "first" was on August 2, 1918, when a squadron formation of eighteen American-built De Havilland 4s of the 135th Aero Squadron, U.S.A.S., took off from the drome at Ourches.

Perhaps the greatest service performed during the war by the American aircraft industry was the design and manufacture of the celebrated Liberty engine. Engine manufacture was a major stumbling block in Allied airplane production. The Liberty, with its 400 h.p. and light weight —825 lbs.—was a fine engine. (C. G. Grey of the Aeroplane called it "the most re-

liable power plant the world had seen up to that date.") Up to the Armistice a total of 13,574 were delivered to Allied plane manufacturers.

Peak American effort was the Meuse-Argonne offensive, begun on September 26. Beginning two weeks after the successful assault by nine U.S. and three French divisions on the Saint-Mihiel salient, the Argonne attack proved a more difficult and costly undertaking. German defenses were formidable, and many of their divisions were finally thrown into the battle. The fighting was savage, and saw, among other fine feats of arms, the gallant stand of Major Charles W. Whittlesey's "Lost Battalion" (which was neither a battalion, nor lost) and a fine example of mountaineer tactics and marksmanship by an Acting Corporal named Alvin York. An equally fine performance was put on by Licutenant Sam Woodfill (an ex-sergeant of the Old Army with six hash marks and an expert rifleman's badge) who cleaned up five machine-gun nests singlehanded, shooting the successive gunners (they were braver men than York's) neatly through the head with his Springfield. Two more fell to his Colt .45 and, that weapon having jammed, a final two were dispatched with a pickaxe. A total of twenty-five in all. There were giants in those days!

The hammer blows of British, French, and American armies so smashed the German military machine that it showed signs of falling apart. Wisely, the German leaders decided to quit while they were ahead, and by mid-November it was all over. Back over the Rhine went the German armies, reluctantly leaving their conquests; sometimes dragging in defeat, more often goose-stepping behind the bands and the glockenspiels. The legend of the unbeaten Army and the traitors at home was already taking the shape which would move to such a bloody climax twenty-seven years later. And the 1,981,701 Americans of the A.E.F. wanted to go home. The Big Parade was over.

The Post-War Army

The Regular Army of the post-war years was a national army in a broader sense. A great many emergency officers were now commissioned in the Regulars, and the National Guard was now a Federal affair—while there was a sizable Officer Reserve Corps. ROTC was a going concern, and the Army found itself hard put to find officers for training for these units and the citizen's military training camps. Later on, there would be the Civilian Conservation Corps to

take care of; tough young men, many of them, who had to be handled with kid gloves. Regular privates and NCOs assigned to help take care of them may have often prayed to have them under strict army discipline for a day or two. Especially as their charges were getting \$30 a month, while an economyminded Congress had cut that of a buck private to less than \$18. But that was always the way of government, and in fact the private of 1917 would never have been boosted to the magnificent sum of one dollar a day if the politicians, having put millions of voters in uniform, had not had an eye on their ballots. (Once the bulk of their constituents were back in civilian life, Congress soon lost all interest in such unprofitable and unpopular items as soldier's pay.)

Despite a wave of isolationism, which by keeping America aloof, doomed the League of Nations at birth, there was a conviction among Service heads and some responsible civilians that America must be in some way made ready for a future conflict on a world-wide scale. The government would still cut back the Services, reducing the Army, as Chief of Staff Douglas MacArthur told Congress, "below the point of safety." (By 1925, the Army had been cut to 136,000.) But the machinery for future expansion would be there, and the next call for the citizensoldier in his millions would find a country a little better prepared. The organization in 1932 of the National Army plan - with nine corps areas, comprising Regulars, Guardsmen, and the Organized Reserve, and including skeleton commands and staffs-formed the framework upon which the new armies would be built.

Technically, the Army was on the road to modernization, although it still had a long way to go when the stillness of a Sunday morning at Pearl Harbor was broken by the crump of bursting bombs and the roar of strafing planes. There were American tanks now - not very efficient, but better than nothing; and the stink of gasoline was beginning to overpower the aroma of horse manure and hay on cavalry posts like Fort Riley. The great Field Artillery School at Fort Sill in Oklahoma was laying the foundation of the splendid system of fire control which was to win praise from friend and foe alike. The Air Force, through many vicissitudes, was struggling to establish itself as a separate entity, amid a welter of conflicting opinions and one spectacular court-martial. And the Navy, too, was lifting its face to the skies, to the dismay of old-line admirals. The fleet was not only getting carriers - big ones - but there was heretical talk among some of the younger officers that the battleship was as dead as the Dodo.

But something more important than the battleship was in danger. The post-war world was full of cynicism, a disgust with things military, a rebellion against authority. After 1929 it was also full of unemployed. Earnest but disillusioned young men pledged themselves never to fight again, while authors vied with each other in showing the horror and futility of war, without admitting that there were times when war was the lesser of two evils. Patriotism was a meaningless phrase to many people, and the few in the democracies who set national interest and safety above the pursuit of a fast buck were openly derided.

It was scarcely an atmosphere in which the elected representatives of the people were likely to vote large sums for armament - even though it was obvious that the new crops of dictators were helping to solve their problems by putting their unemployed in uniform or in their war industries. It was equally obvious that these large and well-equipped armies - raised by whipping whole peoples into frenzies of rage and hate-could not be expected to stand idly on their frontiers forever. It has been well said that armies can do almost anything with their bayonets but sit on them, and it was painfully evident by the close of the '30s that those of the dictator nations had no intention of sitting on theirs. But despite threatening rumblings from abroad, Army expenditures were increased very slowly. From \$365,000,000 in 1935 they were only \$432,000,000 in 1938. The outbreak of World War II sparked an increase, but total Army strength in 1940 was only a few thousand more than in 1920 - 204,000 to 267,000. Much equipment was of the 1917-18 vintage and there were severe shortages in almost every category. Effective tanks were non-existent, and much of the weaponry which would become a familiar and vital part of our arsenal was not yet in the drafting table stage. The Navy was in fairly good shape-although defects in torpedo design would rob many submariners of well earned victories. At the time of Pearl Harbor, the Army Air Force, as it was now called, could muster less than three thousand planes fit for combat.

The Global War

The fall of France and the seemingly imminent invasion of Britain roused Congress sufficiently to pass the Compulsory Military Service Act of September 16, 1940. This, the first ever passed in peacetime, brought 1,200,000 into the Army. Through the efforts of President Franklin D. Roosevelt, who was con-

vinced that the only safety for the U.S. lay in supporting France and Britain, and later Russia, the Arms Embargo legislation passed in 1937 was repealed (October 1939); overage U.S. destroyers traded to Britain (September 1940); the Lend-Lease bill passed (March 1941); Greenland (April 1941) and Iceland (July 1941) were occupied; and the American "sphere of influence" extended and naval patrols initiated in the North Atlantic.

But while the government had been steadily moving toward a complete break with the Axis, this action, directed chiefly against Germany, won only grudging support from the American people as a whole. There was a strong isolationist party, centered, as usual, in the Middle West. One of the most influential "American Firsters" was Charles A. Lindbergh, whose contacts with Nazi Germany had convinced him that no inefficient democracy could stand against the might of the German war machine. He had many followers, but all division among Americans was forgotten in the surprise attack on Pearl Harbor. The disaster and the subsequent invasion and conquest of the Philippines united the country as nothing else could have done. Hatred of the Japanese and, to a lesser extent, of the Nazis, overwhelmed any lingering doubts about neutrality, and an angry and alarmed country prepared to go to war.

The magnificent resistance of the Regulars, American and Filipino, and the partly trained Philippine National Army bought a little precious time on Bataan and Corregidor. But the defenses in the East had been predicated on U.S. control of the seas — and the main American battle strength lay sunk or shattered off Ford Island. With that disaster went all previous U.S. plans for a Pacific War.

By 1942, Army personnel had jumped to over 3,000,000, and the task of assimilating the influx of volunteers, reservists, and selectees was well under way. This time the professional Army was prepared. There were officers trained in the many Service schools who were ready to lead, and the transition from peace to war was carried out comparatively smoothly and efficiently.

Unlike World War I, where the American effort had been on a small scale as compared with our Allies, World War II saw this country take a far larger part. U. S. Service deaths totaled more than 407,000; (U.S.S.R. approximately 7,500,000; British Commonwealth 544.596; France 210,671; China 2,200,000) while American armament – ships, planes, tanks, guns, vehicles, etc. equipped not only our own forces (peak strength 12,300,000) but greatly aided those of our Allies. The output of a huge industrial machine, run-

ning at full capacity, immune from enemy attack and with no lack of manpower, money, or materials was one of the war's deciding factors.

For the crstwhile proponents of isolationism it came as a shock to find the country committed to a truly global war. Yet such it was and Americans saw service in such diverse localities as Alaska and Burma; Iceland and the South Pacific; and Northern Europe and Africa

The U. S. Navy, concentrated mainly in the Pacific, under Admiral Chester W. Nimitz, emerged as the world's greatest naval power, after utterly smashing the great Japanese fleet. The Army Air Force finally dominated the skies over Europe and Asia, and, after reducing many of Japan's largest cities to ashes, finished the war in style by wiping out two cities with the first atomic bombs to be used in combat. The development of the bomb was in itself a triumph of technology—involving a massive industrial effort, a vast amount of money and the services of a wealth of scientific talent.

While American equipment and the feats of U.S. service engineers won the admiration of friend and foe alike, the American citizen-soldier rapidly established a reputation as a tough and determined fighting man.

What he may have lacked in iron "Prussian-type" discipline he made up by versatility and native intelligence. And both he and his leaders had an amazing capacity for learning from past mistakes. Mistakes there were bound to be, as with any green troops. A minor (but much publicized) defeat at Kasserine Pass, in the North African campaign, administered by the "Desert Fox" himself, resulted in some unkind words about American fighting ability. But the remarkable thing about the action was not that untried troops had allowed themselves to be driven back by such a master as Rommel, but the speed with which the Americans rallied and restored the situation.

British author-correspondent Alan Moorehead in his *The End in Africa* wrote: "The truth of the matter was of course, that the Americans were at the same stage as the British were a year after they had entered the war—slow, awkward and apt to be thrown off balance on experiencing hostile fire for the first time. There was just this difference—the Americans were much better armed than we were in 1940 and they learned much more quickly."

Whatever doubts our Allies may have had were soon dispelled, and fifteen months later in the Normandy campaign, the Americans would be complaining (somewhat unfairly) that the cautious British were holding them up. Certainly the British never succeeded in producing a leader of armored columns of General George S. Patton's stature, and Moorehead, who was a keen observer, may have been right when he said ". . . The two temperaments will probably never be the same and it is possible that until the end of the war the British will excell in slogging heavy engagements, while the Americans will best supply the speed and dash for the flanking movements." Speed and dash certainly characterized the movements of our armored units, but in such places as Huertgen Forest and the mountains of Italy, the American infantrymen was to prove that he could more than hold his own in the slow-grinding type of fighting as well.

In the Pacific, the fanatical bravery of the Japanese put soldiers and Marines to a severe test, a test made even more so by the tropical climate and all the diseases which go with it.

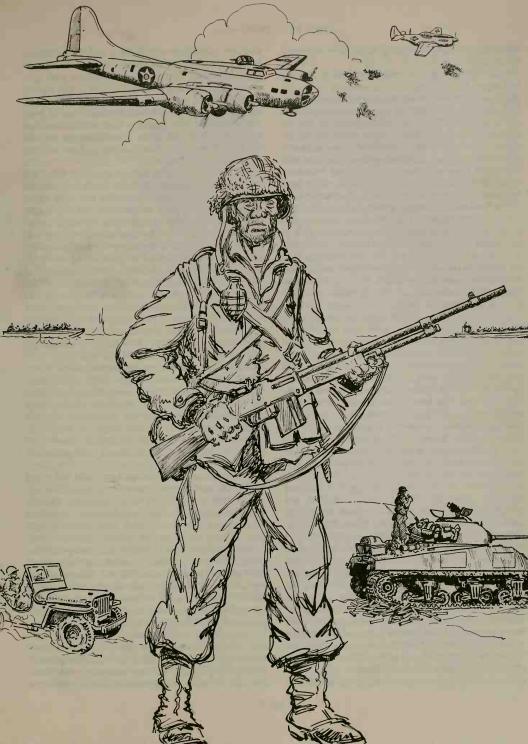
In all theaters the steady build-up of American armament, proceeded on a scale hitherto undreamed of. The mechanical and inventive genius of the American engineers, industrialists, and workers was responsible for an ever-increasing flow of new and improved weapons and equipment ranging from the radaroperated proximity fuse to giant landing ships and the mighty B-29 bomber.

Combat troops would harbor resentment (as they have always done) against the civilian at home. On the morning of Agincourt, Shakespeare makes Westmoreland exclaim:

"O! that we now had here

but one ten thousand of those men in England that do no work today."

But there were few in either country who were not engaged in some fashion in contributing to the war effort - and this included many women, also. The armorers and bowvers, sutlers, and fletchers who equipped and supplied Henry's little Army had given way to a host of workers, both in and out of uniform, whose task it was to keep the comparatively few combat troops supplied with the multiple wants of a modern army. Among a few items procured for Army Ordnance in World War II were 88,410 tanks; 63,000 field pieces, with 328,669,000 rounds of field artillery ammunition; 965,365 machine guns (exclusive of aircraft and AA weapons); 2,941,869 trucks and trailers, and 27,082 self-propelled guns and howitzers. The aircraft industry produced more than 66,000 fighters and 34,000 bombardment planes for the Army Air Force alone, while the shipyards turned out over 34,000,000 tons of merchant shipping, as well as a huge fleet of warships - including 122 escort carriers, over 400 destroyers, 555 destroyer-escorts, and 230 submarines.



Never have a nation's fighting forces been equipped on so lavish a scale.

American fighting men were as skillful in devising techniques for applying the new weapons as the designers and manufacturers were in turning them out. The amphibious assault was one such technique, and was a natural outcome of Allied control of the sea and air. To be fully effective such a seaborne attack called not only for close co-operation between assaulting warships, planes, and landing forces, but also on a variety of new and strange vessels and vehicles-LSTs, LCIs, LCVPs, DUKWs, Amtracks, etc., each specifically designed to carry out its designated task.

The problems in logistics were tremendous and at times seemed almost incapable of solution. Supplies of all varieties, from toothpaste to torpedoes, had to be moved in hundreds of tons, by air, ship, truck, pack animal, coolie, and rail. Not the least share in the victory belonged to the engineering battalions and the Seabees, who built roads, harbors, airfields, and bases, often under fire, and usually under the most adverse conditions of weather and terrain.

If the Navy had grumbled about the small part it played in the Kaiser's War it more than made up for it in World War II, with night actions, in which major units blasted away at incredibly close ranges; old style engagements - with vessels in line ahead, and the salvo splashes creeping closer; and great carrier battles in which no surface ships ever sighted an enemy. The price was heavy. Two battleships, five fleet aircraft carriers, six escort carriers, seven heavy and two light craisers, seventy-one destroyers, eleven destroyer escorts, fifty-two submarines, and close to three hundred other vessels of various types went to the bottom, while over 65,000 Navy personnel lost their lives. But after the initial shock of Pearl Harbor and the swift Japanese sweep through Malaysia and the East Indies, command of the sea and air was gradually regained. The smashing victory at Midway marked the turning point and the Island Empire was doomed - just as Yamamoto had predicted.

Seldom have the advantages of superior geophysical attributes been so overwhelmingly demonstrated. The Japanese economy demanded the uninterrupted import of vast tonnages of essential material. More important, the Japanese war-machine, like all others, depended on huge quantities of oil to ensure its operation. But with ample resources, and separated from her enemies by a (then) impassable moat in the shape of two large oceans, the United States could manufacture in safety, if not at leisure, the tools for the ultimate destruction of her adversaries.

Thus in addition to a great surface fleet, the U.S.

was able to produce an armada of submarines which, in a campaign rivaling in destructiveness that of the German U-boats, all but wiped out Japan's great merchant marine. Japan's commercial fleet at the start of the war totaled some 6,000,000 tons, exclusive of vessels under 500 tons (of which there were a great number). Well over 3,000,000 tons were constructed during hostilities, but of the more than 8,000,000 tons lost from all causes, U.S. submarines sank no less than 5.320,000 tons.

The American combat soldier, as well as being the best equipped fighting man in the world, was also the most analyzed; but studies revealed few facts which might not have applied to the soldiers of any nation in a comparable level of civilization. As might be expected, patriotism, of the flag-waving variety, was likely to be branded as hypocrisy - a verdict also applied to idealistic values in general. In the hard school of battle, even the citizen-soldier rapidly acquired a professional outlook on the business of killing and being killed, and mention of high ideals was sure to produce rude words, often of four letters. (Answering the question "What made you keep going?" 39 per cent of veteran combat troops answered, "Getting the job over with," while idealistic reasons accounted for only 6 per cent of the total.)

Despite the belief that the citizen-soldier needs strong motivation - few of the usual stimuli were found to have much effect. America being in no danger of bombing or invasion, there was comparatively little hatred of the enemy, and what there was was usually short lived, i.e. combat hatred. ("These bastards will kill me if I don't kill them first." "The quicker we knock them off the sooner we'll get home."

"The ---'s got poor old Joe." etc.)

There was no doubt that pride of unit and group loyalty, the feeling that "I can't let my buddies down" was of prime importance as an incentive. Combat troops soon found that they were mutually dependent on the other members of their unit, and that their own life hung on the actions of others, and vice versa.

Pride in a man's own courage and ability to "take it" was a very large factor. Combat was the ultimate challenge to a soldier's manhood, and, because of anxiety as to how he might react, sometimes came as a relief. This would seem to be truer of the more intelligent and imaginative men-the anticipation often proving worse than the actuality.

There was, as noted before, a resentment of civilians and rear-echelon troops among front-line fighters (although they also admitted that such troops were usually doing a good, and very necessary, job). There was also a feeling among combat troops (and as a correspondent I ran into this many times) that their unit was doing more than their share, and getting very little credit for it. The saying "The army is the 1st Division plus 8,000,000 replacements" is an example. This feeling is probably due to the almost complete ignorance of the doings - or even whereabouts - of other units, which exists on a modern battlefield. This resentment (by the combat troops of all nations) was frequently directed (usually very unfairly) at the air forces, which, by the very nature of their activities, were seldom in actual sight of the front-line troops. In contrast, I recall noticing a lack of resentment, unusual under the circumstances, among some of the men of the 9th Division just after being bombed by their own planes in the great "carpet bombing" prior to the breakthrough on the Normandy front at Saint-Lô. Presumably the obvious size and power of the effort, plus the sight of American planes hit and falling, helped them to regard it as merely "TS."

Other than the obvious desire for the war to be over, the thought of ultimate victory was not a great incentive. It was too far away, and too much in the realm of high strategy to be of immediate interest to the front-line fighter; while a victory today usually meant another bitter battle tomorrow, in which the same dangers had to be faced. There was some realization that each point won was a step nearer the end - and home; but coupled with this was the nagging reminder that luck had a way of running out, and that a pitcher could be taken to the well once too often. In this respect there was the feeling that divisions should be withdrawn for a rest after continuous combat, rather than the system of leaving such units in the line for a long time, and filling their dwindling ranks with replacements. Undoubtedly this system had a bad effect on morale, and gave rise to feelings of anxiety - and in extreme cases, to psychosomatic disturbances - which increased in proportion to the length of combat duty. (This, in turn, reflects the general tendency in the U.S. Army to neglect the important factor of the unit, as such.)

The average soldier knew fear, and freely admitted it. Also, the veterans in most cases found battle more frightening the more they saw of it. On the other hand, the majority also felt that as time went on they had more confidence in their skill and combat ability. There was a marked tendency, especially among "green" troops, to fear an enemy weapon for qualities other than its deadliness. Dive-bombing, for instance, was rated high as a "fright-producer," although it was also admitted that other weapons, machine guns, for instance, were far more likely to cause casualties. (The Germans capitalized on this fear, and

put sirens on their JU87s.) With experience the fear of noisy (but comparatively harmless) weapons decreased, while respect for less impressive ones went up.

While on the subject of noise, and the fear of the unfamiliar, questionnaires repeatedly showed that combat veterans thought there should be more training under battle conditions—with live ammunition, and plenty of explosions—even at the risk of some men getting hurt. This statement, that there should be more and tougher training, which in the end saved lives on the battlefield, was made time and again.

Confidence in their officers and NCOs meant a great deal, with personal courage at the head of the list. As one veteran put it, "Everyone wants someone to look up to when he's scared." Combat readiness and efficiency was much higher in units which had such confidence.

Discipline was not rated highly as a combat incentive by the rank and file, but was considered an important factor by officers. The power of the group - in this case army authority - was admitted as a big factor in maintaining discipline, and, if not an actual incentive to fight, was a deterrent to any unauthorized movement to the rear. The reading, every six months or less, of the Articles of War, with the frequent recurrent phrase, "punishable in time of war by death or such other penalty as a court-martial may direct," served as a grim reminder that the individual was a very small and insignificant part of a very large and awe-inspiring machine. (Actually, of 102 executions, only one was for desertion under fire - the first such execution for a military crime since the Civil War. The other 101 were for murder or rape.)

Above the small group (platoon or company) level, pride in unit, and identification with it, was largely confined to the division. Some, such as the 1st—"The Big Red One"—were exceedingly (and justifiably) proud of their division. All were publicity-conscious, and unhappy indeed were those who, for security reasons, could not be mentioned by the press. The urge to let the folks back home know that they were in there fighting was almost irresistible (and of frequent concern to the censors), and obviously any kind of recognition was a great morale booster.

The U. S. Serviceman fought a great war. And he had some great leaders. There was only one trouble. The American officer had been taught—it was an article of faith—that, Clausewitz to the contrary, war and politics were two separate things. Believing this, they won the war—and lost the peace. Enough for the American leaders that the enemy be defeated; the aftermath was of little concern of theirs. Appeals

from the more worldy wise British for forays into the Balkans, and swift sweeps into the heart of Germany and Central Europe, were looked on with suspicion, as aiding, with American blood and equipment, the devious policies of perfidious Albion.

Unfortunately the day of the "simple, honest soldier" is past. Now naïveté in a high-ranking officer is as scrious a crime as any in the military calender. To survive in the dark and twisting paths of Weltpolitik, our leaders, both military and civilian, need be as Machiavellian as any Renaissance princeling.

Most of the troubles which beset us today stem from the "non-political" thinking of those years. That this is no new problem is shown by the words of Polybius: "It is no doubt a good thing to conquer on the field of battle, but it needs greater wisdom and greater skill to make use of victory." To those concerned about incentive and motivation it is obvious that the citizensoldier of future wars will need at least hope, if not assurance, that his sacrifices will not be as unproductive of lasting peace as were those of his predecessors.

The Marines

In the period just prior to World War I the country was becoming aware of a corps which would someday become the backbone of the nation's fighting forces. There was nothing new about the Marine Corps. They had been around for a long time, since 1775, and, as their battle song proudly proclaimed, they had fought their country's battles, "From the Halls of Montezuma to the Shores of Tripoli."

Their duties, as in other navies, were to serve afloat; to provide a disciplined force for boarding or repelling enemy attacks, for the limited landing operations of the period, and last, but not least, to provide an armed guard for the officers in case of mutiny (Marine sentries aboard ship still stand guard over "Officers country"). Marine detachments were necessarily small. Even with increases made during the Civil War the Corps never exceeded 3900 officers and men, most of them on sea duty. Marines were used in some land operations, but they had little experience in land warfare and small opportunity to gain any. A battalion of recruits, of three weeks' service, fought at Bull Run, and Marines took part in the attack on Fort Fisher in January 1865.

They occupied a peculiar position, "neither fish nor fowl," and there was talk at one time during the war of making them part of the Army. Rear Admiral



U.S. Marine, Revolutionary War

David Dixon Porter wrote in 1863: "I would consider it a great calamity if the Marine Corps should be abolished and turned over to the Army . . . the past efficiency of our Marine Corps fills one of the brightest pages in the history of our Country, and the man who proposed such a measure cannot know much about the service, or is demented . . . I wish anyone could see the difference between the Marines out here and the people they call soldiers; they would not talk of abolishing the Corps. I can only say, God forbid that it should come to pass." Anyone who has the best interest of America at heart, and who has some knowledge of the fighting services will say, Amen, to that. Yet every once in a while, through the meddling of civilians or the jealousy of the Army or Air Force, a scheme is put forward to reduce the Corps to impotence, or disband it altogether.

As the gallant admiral wrote over a century ago, such men must be demented. For from a tiny corps—almost unknown to the public at large—in three wars they have progressively built up their strength, and their reputation. If, at the beginning of World War I, there were many Americans who knew nothing of the Marine Corps, there were few at the finish who had not heard of Belleau Wood. That war saw close to 79,000 Marines serving, and established the



U.S. Marine, 1812

Corps in the public mind as a unit whose training, efficiency, and morale were of the highest. The following tale was told by Colonel Thomason, USMC, in his Fix Bayonets, of an American visitor to a French hospital who, seeing a face unmistakably Transatlantic in origin, said, "Why, You must be an American," to which the casualty replied, "No, ma'am, I'm a Marine." It is an attitude which sometimes puzzles the public; and often annoys members of the other services. But it is typical, and indicative of the fierce loyalty of Marines to their Corps, and of their unshakable morale.

Between the wars Marines served in Haiti and Nicaragua, and the Corps evolved the amphibious assault techniques which were to become the feature of their operations in the Second World War. Marine aviation was also developed, and the foundation laid for the amazing close air-support of ground troops for which the Marines became famous. At the time of Pearl Harbor, the Corps numbered some 66,000. It was rapidly expanded and finally put six divisions into the field, with four air wings and numerous reinforcing and specialized units.

In bitter fighting across the Pacific, over 24,000 Marines died—adding to the battle honors of the Corps such names as Wake Island, Guadalcanal, Tarawa,



U.S. Marines, Civil War period. Left: full dress Right: campaign uniform

Pelelieu, and Iwo Jima. It emerged from the war the nation's premier fighting force; noted for the toughness of its training, its morale, its esprit de corps and with a sure touch for the sort of publicity which kept its ranks filled with eager youngsters - and its Service rivals green with envy. Certainly the Marines have never attempted to hide their light under a bushel. When they were battling their way into Seoul in 1950, one officer from Army headquarters sourly commented that ever since the famous flag-raising picture on Iwo Jima, Marines would rather carry flags than weapons. But if flag raising, and unit signs (the familiar "You are now crossing the X, courtesy of Y company of the Z regiment") and slogans help build and maintain morale, then they are praiseworthy efforts. And if they seem a little childish or bombastic to the non-military observer, then so do all the other time-honored devices for building esprit de corps; silver shields, tall plumes, fancy uniforms, special badges, customs, and privileges. It is a small price to pay for increased fighting efficiency and spirit.

The great rush to disarm after the defeat of Japan saw the Corps greatly reduced in strength but due to the efforts of men like Colonel (later Lieutenant General) "Chesty" Puller—most decorated Marine and perhaps the greatest combat officer the Corps ever

had—training, discipline, and morale were kept at a high peak. This was especially hard to do in the days when the nation, in a hysterical urge to forget the war and its sacrifices and to return the servicemen to civilian life, deliberately wrecked the great Army which had been so painstakingly assembled and equipped. In the face of mounting threats of Russian aggression—not only were the services reduced to skeletons, but such an outcry against discipline, inequality, and regimentation was raised as to threaten the effectiveness of the whole military program.

Sparked by clever leftists propaganda, and supported by sob-sisters, so-called intellectuals, preachers, disgruntled mama's boys and the tearful families of inductees, and the unreasoning but powerful voice of the American female (which Philip Wylie has so devastatingly described as "Momism") the movement to remove severe disciplinary measures and the haughty rule of the "arrogant and caste-conscious" Regular Army officers gained momentum. Vote-conscious politicians lent a ready ear, and succeeded in forcing the Secretary of Defense to appoint the controversial Doolittle Board.

Granted, the Board had a problem. The country was going to need a large peacetime Army, and, in part, it was the Board's job to make the Army popular -to conform to the public image of a democratic Army. It must be pleasant, with a minimum of orders and fatigues, of tiring marches in rain or under a hot sun. Cruel sergeants must have their fangs drawn and their harsh voices must be softened. Power to punish must no longer be in the hands of the junior officer, but should be relegated, through channels, to higher authority. The tender youth of America must be shielded as much as possible from the crudities of Army life. Above all, he must be protected from the idea that he was in the service to serve, and that serving (should an international misunderstanding arise during his enlistment) might very well mean dying as well.

So with the demand that army life must be made as attractive as possible, both discipline and training were relaxed. Emphasis was on lectures, and organized games, while cooks prepared meals that a Regular of a generation before would have considered a gourmet's dream, and the ever-present PX afforded those luxuries not provided by the Service. But wars are not won with baseball bats—nor is a campaign just fun and games. Wars are fought with deadly weapons (with the use of which it pays to be familiar) amid unnerving sights and horrid sounds, and against enemies whose one purpose is to maim and destroy. No training can simulate the real thing. But

it can be used to harden the body and condition the mind – condition it to the point where it will unhesitatingly obey orders under the most adverse conditions.

It is also necessary that those giving the orders, officers or NCOs be respected and regarded as superiors. But if the sergeant, whose word should be absolute law in the platoon, has been regarded as just one of the fellows, and the lieutenant, a pleasant and easy going big brother instead of a minor deity sitting at God's right hand, then obedience will be given grudgingly, if at all. Spoiled young men, with no more motivation than an easy life and good food, are not going to risk dying at the say-so of a higher-up for whom they feel neither fear nor respect.

Happily, while the Army was being "reformed" the Marine Corps still maintained its old standards. The Drill Instructor still ruled in the land of the Leathernecks, and its training was as hard and brutal as it always had been (and, let us hope, always will be). There was no nonsense about the status of officers and NCOs, and orders were obeyed with snap and alacrity. Although in the summer of 1950 less than 10 per cent had seen combat, the Corps was far better prepared for battle, both physically and mentally, than the Army.

It was well for the country that it was, for when the North Korean People's Army, the Inmun Gun, smashed across the 38th Parallel on June 25, 1950, driving the Republic of Korea forces (our protégés, whose Army we had trained and armed and which its American commander said was ". . . the finest in the history of Asia . . . no previous army can compare with it, even that of Genghis Khan") in rout before them, the American Regular Army was found wanting.

Korea

Americans, volunteers and militia, have given way before. There is nothing amazing about that. It may be forgiven raw boys, soldiers in name only, with neither training nor discipline—and with officers and NCOs equally inexperienced—if they flinch at first contact with the enemy. But the troops of Task Force Smith and others who met and tried to stop the victorious North Koreans were Regulars—the men who, in our other wars, have traditionally stood fast while the militiamen ran. Now they ran, too—not always in blind panic at the first shot—but as they found

themselves outflanked, and as fire from Communist tanks raked their lines, they began to come apart. Nor was it only the combat infantryman who failed in many cases to measure up to the standards set in other wars. Artillerymen, who traditionally defend their pieces to the last, often left their guns at the first NKPA fire, and Major General William F. Dean had cause to remark on the lack of courage of many of the tank commanders.

In a pre-dawn skirmish small arms fire from an enemy patrol (later estimated at six or seven men) firing from 500 yards away, routed a Field Artillery battery, the men "taking off" along with two squads of infantry attached for cover. The battalion executive officer finally got twelve artillerymen to accompany the prime movers and their drivers back to the position to remove the howitzers. Three riflemen and a BAR man volunteered to give them cover. These almost silenced the enemy and the equipment and ammunition were removed. As the battery commander told the battalion executive, that the battery had been "overrun" it would appear that the blame for the debacle did not lay entirely with the enlisted personnel.

These soft American youths, who had been so ruthlessly torn from the comfortable routine of the Japanese Army of Occupation, had never been told that war would be like this. In fact, they had not been told anything about war at all. Recruiting posters stressed a good time, with free travel overseas, and the chance to learn a trade. There had been no mention of blasting shell fire, which left a buddy a mangled bundle of rags and flesh; scrambling through fetid rice paddies or up steep hills in 110-degree heat; or of endless lines of brownclad figures, who came relentlessly on, regardless of shells or small arms fire. And a new Army word came into being, "Bug out."

In *This Kind of War* Fehrenbach wrote: "No American may sneer at them, or at what they did. What happened to them might have happened to any American in the summer of 1950. For they represented exactly the kind of pampered, undisciplined, egalitarian army their society had long desired and at last achieved.

"They had been raised to believe the world was without tigers, then sent to face those tigers with a stick. On their society must fall the blame."

Not all ran. Many stayed and many died—and among them were a high percentage of officers. Casualties among high-ranking officers were proportionately heavier during those dark days than at any time since the Civil War. Many fell doing sergeant's

work, attempting to piece together shattered units, or as a last resort, seizing bazooka or grenades and trying to stem the enemy rushes themselves. It was an expensive way to fight a war but it had to be done.

Meanwhile the press was at its usual work, feeding its paying customers what they wanted to hear; allaying what should have been the nation's fear and anger with tales of heroic retreats and rear-guard actions against odds of 20 to 1. Neither press nor the Pentagon could afford to tell the American public that their Regular troops were being driven from prepared positions by enemies with no air power, few guns, and less than two to one superiority in men.

Nor dared they tell them that, all publicity to the contrary, the Army was equipped in many instances with obsolete World War II gear-with radios that wouldn't work, with 2.36-inch bazookas, whose missiles flared harmlessly against the thick armor of the T-34 tanks. Some vehicles had to be towed to the LSTs when loading for Pusan. One regiment complained that it had only 60 per cent of its quota of radios, and that four-fifths of them were unworkable. A battalion of another had only one recoilless rifle while most of its mortars, rifles, and carbines were unserviceable. When the 1st Marine Regiment was activated, 67 per cent of the rifles were rejected as unfit for service. Even grenades were in short supply, and there were few of the very necessary 60-mm mortar illuminating shells. Half of what there were proved to be duds.

The new 3.5-inch rocket launcher had not been issued, due to problems in perfecting the ammunition. The difficulty had been overcome and the ammunition had been in production only two weeks before the Korean War began. The launchers were flown in as fast as possible, and scored their first success in the fighting in Taejon on July 20.

The first tanks in Korea were the M24 (Chaffee) reconnaissance models—light tanks, with 30-mm armor and of limited fighting value. It was not until July 31 that three Pershing M26 mediums (found in bad condition in an ordnance depot in Japan and hastily repaired) went into action at Chinju. While on the subject of armor, it was unfortunate that much of Korea was poor tank country. Steep hills, deep ravines, and flooded rice paddies, in most places confined even tracked vehicles to the few narrow roads, where a successful roadblock or a blown bridge might immobilize a whole column. This happened time and again, and later did much to nullify American superiority in armor and wheeled transport.

Understandably, there was little mention of the

fact that the Secretary of Defense (that new post created in 1947) in an ecstasy of economy had cut one billion, seven hundred thousand dollars from the Army budget; thus necessitating the reduction of regiments from three battalions to two, dropping one rifle company from each of the remaining regiments, and reducing divisional artillery by one battery. These unpalatable truths were not made public. Instead, the nation was told that all was well, that the morale and combat efficiency of their troops was excellent, and their equipment of the best. Americans had developed the business of kidding themselves to an art.

Not all took part in the game of self-deception. Hanson W. Baldwin, respected military writer of the New York Times, wrote that the Pentagon had ". . . too often disseminated a soothing syrup of cheer and light." But by the beginning of August any American with brains enough to read a map could see that something was very wrong. The U.S. troops and the remaining ROK divisions were now holding the perimeter of a relatively small area in the southeastern tip of the peninsula. True, reports still spoke of "hordes" and "overwhelming masses" of North Koreans, but many in the States realized that U.S. air power was unopposed, and that troops, tanks, guns, and supplies of all kinds were pouring into Korea through Pusan. Had they known that the attacking Immun Gun numbered less than half the defenders, while the NKPA tanks were outnumbered five to one, they would have been even more disturbed.

Quoting from Roy E. Appleman's South to the Naktong-North to the Yalu: "The establishment of the Pusan Perimeter may be considered as a dividing line in viewing and appraising the combat behavior of the American soldier in the Korean War. The Pusan Perimeter for the first time gave something approaching a continuous line of troops. With known units on their left and right, and some reserves in the rear, the men showed a stronger disposition to fight . . . (when) Supporting troops were seldom within reach, American soldiers, realizing the isolated nature of their positions, often would not stay to fight a losing battle. Few in July 1950 saw any good reason for dying in Korea; with no inspiring incentive to fight, self-preservation became the dominating factor."

But the enemy was also in bad shape. The ROK forces had in many cases fought well (in the first six weeks their casualties were 70,000 compared to 6000 Americans). By August, NKPA losses amounted to some 60,000 most of which can be credited to ROK units. Navy, Marine, and Air Force planes hammered the enemy constantly, smashing at front line units and supply lines alike. By the end of July

Far Eastern Air Forces alone had flown 8600 sorties.

Most important of all, the Army was learning how to fight. American boys, too out of condition (why walk to the corner drugstore when you can drive?) to elimb the steep Korean hills, and unable to stand the Korean sun, were gradually hardening up. The stabilizing of the line on the perimeter and the arrival of new troops made it possible for units to secure their flanks. And, like most Americans, there was a limit to the amount of pushing around they would take. They were finding out the hard way what they should have been taught in their training camps, to rely on themselves and their weapons, on their buddies, and on their officers. With every day that they lived with the sights and sounds of war, they came to forget the nonsense they had been told about "only a police action" and "All being back in Japan in a month or two," and to realize that they were actually in a great big shooting war. And that the only way to stay alive was to be as rough and tough as the enemy.

Some of them had fought gallantly in the weeks of retreat as individuals. Now they would fight together. They would never be Regulars in the old Army sense. Nor would they ever have the esprit de corps of the

Marines. But they were learning.

And relief was on the way. MacArthur knew well the value of command of the sea, and his landing at Inchon, far to the north, was designed to cut off the NKPA in the south, thus liberating Seoul and relieving pressure on the Pusan Perimeter at one blow. The landing, as had been so many others in the "old" war, was a Marine show, and it was the Marines who bore the brunt of the heavy fighting which finally cleared the shattered city of Seoul. Marines had also been thrown into the fighting in the Pusan Perimeter.

". . . these Marines have the swagger, confidence, and hardness that must have been in Stonewall Jackson's Army of the Shenandoah. They remind me of the Coldstreams at Dunkerque . . ." So wrote a British military observer, and in those critical weeks the Marines fully lived up to their reputation.

Simultaneously, with the landing at Inchon, the beleaguered troops in the Pusan Perimeter broke out and smashed north in a series of actions which was to see them first link up with the Inchon forces and then drive toward the Yalu. And only ten weeks of fighting had made a marked change in the Army. There were, of course, many more troops, and no lack of equipment, but the change was in the spirit. There would still be defeats—some officers and men would still fail the crucial test of battle; some incompetents still remained to be weeded out. But the

foundation had been laid for the great army which finally fought the Communists to a standstill across and above the 38th Parallel.

Consider the action fought by Task Force Lynch during the pursuit of NK forces retiring north toward Osan. The point, of three tanks, had pressed ahead in the dark, leaving the motorized column somewhat behind. Two T34s attacked the head of the column, but there was no panic. One was destroyed by a 3.5-inch bazooka team. Another raced down the columns firing and smashing vehicles. It was immediately brought under fire from various weapons and finally destroyed by a five gallon can of gasoline, poured into the engine hatch. More T34s arrived, and the three remaining U.S. tanks came up from the rear of the column. Two of the American tanks were destroyed and a violent infantry-tank battle raged along the column for an hour, amid blazing vehicles, streams of tracer and exploding shells. Task Force Lynch lost two tanks, fifteen vehicles, and suffered thirty casualties, but seven T34s were destroyed and three more driven off. It was a very creditable affair, fought under circumstances which might well have produced a disaster a few weeks before.

The Eighth Army's march north was rapid—a series of comparatively cheap gains, interspersed with periods of violent action. And always there were the visible signs of victory—enemy dead, smashed and burning vehicles, abandoned tanks and guns and, occasionally, pitiful reminders, in the shape of murdered prisoners, of the savagery of the enemy. It was the finest type of fighting to restore morale and build confidence. The troops felt they had the measure of the NKPA—the remnants of whose shattered divisions were fleeing north. There was gossip in the ranks about victory parades in Tokyo and Christmas at home—but hopes were to be dashed, and new-found confidence rudely shaken.

On October 25, the Chinese, who to the number of some 300,000 had penetrated into the mountains of North Korea, struck the ROK 6th Division and routed it. A few days later at Unsan, it was the turn of the 8th Cavalry. Their 3rd Battalion, acting as rear guard, was cut off and made a memorable stand, beating off waves of Chinese for two days. A relief column was forced back and but few of the battalion reached the U.S. lines. Everywhere the victorious northbound troops were halted—ordered to hold—and finally, to retreat. And they found, as other armies have found, that it is often harder to fight a retreating action than it is to advance.

There were again a few minor panics, as fast-moving CCF units cut south and established roadblocks

across the UN lines of retreat. A major disaster developed when the 2nd Division, retiring from Kunu-Ri toward Sunchon, and organized for a motor march rather than for action, ran into an ambush set by a Chinese division. Along both slopes of a fivemile-long valley, Chinese guns and small arms poured fire on the long motorized columns, laden with tired infantrymen. The lead tank got through, the rest, halted while a vehicle was pushed off the road, were raked by heavy fire. A pile-up of smashed and burning vehicles at the narrow pass at the southern end of this modern valley of death blocked all exits for vehicles, until it was finally pushed aside by two light tanks. Everywhere men were cowering, running, or fighting - as their individual natures dictated. There was little cohesive effort, many men were seen dazed and apathetic, hugging the ditches weaponless and defenseless. The men of the medical convoy, halted for hours at the far end of the long procession, grew nervous at the sight and sound of the action ahead. Someone, an officer, it is said, spoke the fatal words and everyone broke for the darkening hills. Not everyone. One hundred and eighty wounded lay in the trucks. The Air Force had been furiously bombing and strafing the hillsides on either side of the valley, and they had orders to destroy all abandoned UN vehicles. Early next morning they didwith guns, and bombs, and napalm. Medics who were close enough could hear the screams as the flaming stuff enveloped the trucks.

There were heroes as well. Some fought back, trying to clear the hills, but these were small groups, uncoordinated. One sergeant of the 9th Infantry, unaided, dragged an 81-mm mortar from a truck and, single-handed, opened fire. But all in all the retreat of the 2nd Division was not a bright chapter in our military history.

On the other side of the peninsula, Marines and soldiers had been pushing north into the mountains and along the East coast. This is forbidding terrain, high and rugged, and in the winter the winds scream down from Manchuria, bringing temperatures far below those of the rest of the peninsula.

In the last days of November, in bitter weather, Chinese in overwhelming strength struck out of the mountains at the Marines and Army troops in the area of the Changjin Reservoir. Other Chinese attacked further down the long winding road to Hunenam, on the sea, striking at Hagaru and Koto-Ri. The army unit, Task Force Faith, after desperate fighting, tried to cut its way back to Hagaru. Some four miles from safety its commander was killed and the force went to pieces. A force of U.S. and Royal Marines

tried to reinforce Hagaru from Koto-Ri and was ambushed; only three hundred men and some tanks reached Hagaru. The Marines at the Reservoir moved back to Hagaru, fighting every inch of the way, in a night march with 24-degree-below-zero weather. At Hagaru, casualties, many of them frost-bite cases, were flown out, reinforcements flown in and the united force of some 10,000 men and 1000 vehicles prepared to fight its way to the sea. It was here that Major General Oliver P. Smith, U. S. Marine Corps, made the now famous remark to the correspondents: "Gentlemen, we are not retreating. We are merely attacking in another direction." And attack they did, in what has been called the greatest fighting withdrawal of modern times. Clearing the flanking hill crests and ridges, they fought their way in sub-zero weather, bringing their dead, their wounded, and their equipment. At Koto-Ri the column now numbered 14,000, of whom 12,000 were U. S. Marines. And the retreat went on. Enemy-held mountains were taken, blown bridges replaced, road blocks brushed aside. It was, as Robert Leckie called it, A March to Glory. The Chinese trap was sprung, and at the cost of 7500 casualties the UN troops won free. More than that, they and their air support inflicted an estimated 37,000 casualties on the CCF. The fact that American youths in one sector would abandon vehicles, weapons - even their wounded comrades - while a few miles away similar youths, under far worse conditions, brought out not only all their equipment but even their dead, is a striking tribute to what training, discipline, and esprit de corps can accomplish.

The Chinese thrust drove the UN forces back down the peninsula in what the press called the worst defeat the United States had ever suffered. Actually, the Chinese were outrunning their supplies, and the incessant attacks by UN aircraft, plus the stubborn resistance of the rear guard was beginning to tell. After the disorder of the first few days, the withdrawals were smooth and swift - outpacing the footslogging CCF. The Marines, Army, and ROK troops of X Corps had been evacuated from Hungnam and once more joined the Eighth Army. The line, first stabilized above Seoul, went back again until it stood roughly 75 miles south of the 38th Parallel. Then under the inspired leadership of General Matthew B. Ridgway, it surged north once more. Their old commander, General Walton H. Walker, killed when his jeep collided with a truck, was a fighter. Ridgway was a fighter, too, but he was more. He had that flair for leadership, the touch of the theatrical which means so much. A great commander has the knack of reaching men's hearts and firing their spirits. Ridgway, with his ever-present grenades, his confidence and aggressiveness was what the Eighth Army needed. There would be other defeats and withdrawals, but slowly and surely the Army, 365,000 strong by now, was acquiring the character and morale which would see it through two and one-half years of war.

Its morale would be sorely tried by indifference at home and by the limited nature of the war. A war which, as a soldier said, "We can't win, we can't lose, we can't quit." Yet the Army's fighting effectiveness would remain high despite the rotation of veteran troops and the influx of reservists recalled from civilian life. Many of these saw no profit in the war, no reason for it, and were filled with resentment at being called to leave jobs and families while others stayed on in a country still geared for peace. Yet by the war's end, it was a veteran army, one which had seen every kind of fighting over every kind of terrain, from steaming rice paddy to sub-zero mountain ranges; and fluid, open warfare to a war of fortified lines, which outdid the earthworks and massed bombardments of World War I.

Allied nations sent contingents, but even the Commonwealth Division, with its 6667 casualties, was only a token force. The ROK forces bore the brunt of the fighting, with over 400,000 dead alone, but the chief burden lay on the United States. U.S. casualties totaled more than 157,000, and without the immense quantities of supplies, the activities of the United States Navy, and the vital work of the Air Services: Air Force, Navy, and Marine, there would have been no victory. For victory it was, despite all the statements to the contrary. Communism had made its first major attempt to subjugate by force of arms a section of the free world. It had been beaten back with bloody loss. An estimated 900,000 Chinese and 520,000 North Koreans were casualties, and the industrial areas of the North were a wreck.

But the hard fact had to be faced that the Communists, too, had won a victory. For, if their attempt to overrun the land south of the 38th Parallel had failed, the UN's drive to free all Korea had also failed. After more than three years of bloody war, and a death toll, including civilians, of millions, the boundary lay where it had before — at the 38th Parallel.

For this was a new kind of war, in which the greatest weapons in America's arsenal lay unused. Nor did shell or bomb fall on Chinese territory, although Chinese planes sortied from the "untouchable" airfields on the north side of the Yalu; and men, weapons, and supplies flowed south from Manchuria in a steady stream. By its very nature there could be

no decision, only a postponement; no clear-cut victory, only containment.

Air Power and the Atom Bomb

During the years between the two World Wars there had been many proponents of air power, like the Italian General Giulio Douhet, who maintained that it was possible to win a war by ruthlessly bombing the great centers of population and industry. That this doctrine was incorrect was proved by the results of the intensive bombing of Germany by Bomber Command of the R.A.F. and by the Liberators and Fortresses of the U. S. Air Force.

In all, close to 2,750,000 tons of bombs were dropped. The cost of this massive effort was more than 20,000 bombers and nearly 160,000 airmen. Damage to German cities were great - more than 20 per cent of all houses or apartments in Germany were destroyed or badly damaged, and at least a quarter of a million civilians were killed. Yet, to the last, production of vital war materials, while cut, was never totally disrupted. In fact, aircraft production during the year 1944 rose to a high of 40,593. The disciples of Douhet had sadly miscalculated the adaptability of the civilian population and the ability of the industrial machine and the public services to recover in a remarkably short time from the effects of even a major bombing. The post-war reports of the U. S. Strategic Bombing Survey showed on analysis that strategic bombing, with the weapons then available, had not been the decisive factor in the defeat of Germany.

The blow to the partisans of air power as the supreme weapon, as revealed by the results of the European War, was more than offset by the abrupt ending of the war with Japan with the destruction of two cities by two bombs. The glare that lit the desert at Alamogordo that day in July had shown the way to a whole new concept of strategic air warfare. No longer was there need for vast armadas of giant aircraft, serviced and supplied by an army of men. Now a comparatively small force of giant bombers could annihilate any city within their reach—and modern technology was lengthening this reach at a great rate.

Thus for a time the American Air Force was in exclusive possession of the ultimate weapon. Here was Douhet's dream – or nightmare – come true.

By the time the smoke had cleared away in Europe it was apparent that the United States and the Soviet Union were about to clash in a struggle for power. The lines were speedily drawn, each side with its satellite states or allies—willing or unwilling—and each side wooing a host of undecided and uncommitted neutrals.

A renewal of the struggle in Europe, with our sadly reduced forces striving to hold up hordes of Russians was not an inviting picture, especially to those politicians whose bid for the popular vote had precipitated the crisis. By stripping the country of its armed might at a time of great international tension, these gentlemen, who, like most politicians, never hesitated to put party before patriotism, had gravely compromised the position of the United States in world affairs. Any means, then, which would enable us to maintain our position abroad and ensure our safety at home was welcomed with open arms.

The delivery of this atomic weapon which was to supplant in great measure our regular forces was, of course, the task of the Air Force, which had won its long war for independence in September 1947. Consequently the new service gained strength at the expense of the other two, the Army dropping in strength from eighty-nine divisions in 1945 to ten divisions in 1950. Unfortunately, while much of our defense budget was being spent on atomic weapons, and the super-bombers for the Strategic Air Command which would deliver these weapons to their targets, it was becoming apparent to even the most ardent supports of total nuclear war that there were many vital conflicts being waged around the globe in which, although our interests were involved, the use of this ultimate weapon was not feasible. Not only that, but it was increasingly obvious that before very long the Russians would have an atomic weapon of their own. This threat became a reality in September 1949. Now the issues at stake were no longer the outcome of one or more campaigns, or even the military defeat of this country or its opponent, in the hitherto-accepted sense of the word; involving loss of territory, forced disarmament, reparations, and the like. What had to be faced was the probability of the destruction of the greater part of our urban and industrial centers and the death of a high percentage of the population.

Just what this percentage would be there was, of course, no means of knowing. Considered estimates have run as high as 60 per cent. This would depend on the amount of civilian preparedness (at the time of writing, almost nil) the duration of the assault, the type and number of bombs used; and the amount of warning, if any. This death toll would be ac-

companied by widespread destruction and dislocation of all facilities: power, water, gas, transportation, communication, and public health. The nation would be temporarily crippled, the time of recovery depending on the number and efficiency of the members of the local, state, and national government who survived. That this destruction would be mutual might be of cold comfort to the survivors.

Within ten months the United States was involved in a war in Korea, which, while labeled a "police action" speedily became a major conflict, in which nearly five and three-quarter million of Americans served. Faced with retaliation, the United States refrained from using its atomic weapons, and it was, of course, the foot soldier who finally fought the enemy to a standstill. With rifle, machine gun, grenade, and mortar, and sometimes the bayonet, the UN infantrymen fought, and outfought, their tough Communist opponents. Tanks, artillery, Tactical Air, and the Navy all added their vital and well coordinated support, but in the last analysis it was the men with the gun the PBI-"The poor bloody infantry"-who did the dirty work. Yet the events of the Korean War did not shake the conviction of the majority of those at the head of our military planning, both service chiefs and civilians, that the safety of the country and the successful prosecution of the cold war depended on the building up of a great apparatus for the delivery of atomic weapons.

This was in part a reflection of the public reaction to the long bloody stalemate in Korea—similar to the "never again" feeling which affected European thinking after the indecisive trench warfare of World War I. The "New Look," which was mainly the old atomic theory under a new name, was proclaimed by the incoming Eisenhower administration as the nation's military policy—despite the misgivings of the Army members of the Joint Chiefs of Staff.

The deterrent policy laid down by Secretary of State John Foster Dulles in January 1954, the policy of "massive retaliation," was founded on our great (but temporary) nuclear superiority. His statement that, upon Communist incursion on the territories of the free world, the United States would retaliate "instantly, by means and at places of our own choosing" was taken to mean that our nuclear might would be directed against the cities and industrial centers of the Communist homelands, rather than attempting to wage a conventional war against an enemy far superior in manpower and armament. Of this grand strategy Liddell Hart wrote in an article on NATO in Ordnance magazine:

". . . Ironically, this short sighted 'New Look' policy was enunciated seven months after the Russians' announcement that they had produced and tested a thermonuclear bomb. It seemed even more short sighted and absurd when the Russians successfully launched their first Sputnik, an earth-circling satellite, in October 1957, and then their moon rocket in January 1959 . . . "

Doubting whether the threat of retaliation would deter lesser aggressions, or even a serious invasion threat by forces armed with conventional weapons, he wrote:

". . . for nuclear parity leads to nuclear nullity because the suicidal boomerang result of using such weapons induces strategic sterility."

This policy was, of course, only an extension of Douhet's old theory, and as such was enthusiastically supported by the Air Force. The Air Force maintained, and still maintains, that its nuclear force will be a sufficient deterrent to an enemy. The Strategic Air Command, under which falls not only the manned strike forces of B-47, B-52, and B-57 bombers with their attendant KC-97 and KC-135 tanker planes, but also the intercontinental ballistic missiles, Atlas, Titan, and Minuteman, has under its control some 85 per cent of the non-Communist world's nucler fire-power. To ensure that a sufficient percentage of its strike force will survive to carry out its retaliatory mission, it relies on fast reaction, with an alert coupled with a complex and fantastically expensive warning system. The Ballistic Missile Early Warning System (BMEWS) can give about fifteen-minutes' notice of an attack by missiles from the Soviet Union. One-half of our manned force can be launched within this time. Dispersal is another factor in ensuring that at least some of our installations will be left intact, as well as the "hardening" (protecting with masses of concrete and steel) of the missile launching sites.

The Army's long quarrel with the proponents of massive retaliation lies not in the development of nuclear weapons and the means of delivering them, but in the fact that this policy was being carried out to the exclusion of all other lines of reasoning, and, because even the colossal defense budgets of the recent years will only stretch so far, at the expense of the other services. That Army should protest such a policy was only natural. As the chief sufferer it was losing in power and effectiveness as the Strategic Air Force grew stronger. But the main concernfirst of Chief of Staff General Matthew B. Ridgway and later of General Maxwell D. Taylor—was that all indications pointed to the fact that the catastrophic consequences of a nuclear war would (1)

Deter the United States from using its atomic devices in anything short of an outright nuclear attack on this country or one of its NATO Allies, and (2) That threat of mutual destruction would deter both nations from using atomic weapons. This would leave the United States faced with the alternative of fighting a war, such as the one in Korea, with conventional weapons with which by this time we were illequipped.

General Taylor, in his *The Uncertain Trumpet*, said: "The many other limited wars which have occurred since 1945—the Chinese Civil War, the guerrilla warfare in Greece and Malaya, Vietnam, Taiwan, Hungary, the Middle East, Laos, to mention only a few—are clear evidence that, while our massive retaliatory strategy may have prevented the Great War—a World War III—it has not maintained the Little Peace . . ."

To restore the proper balance, General Taylor proposed what he termed the Strategy of Flexible Response. After many vicissitudes this idea of an all around force is taking shape.

The naval position in the three-cornered struggle constantly being waged at the highest planning levels has been for the most part to stand aside from the major conflict between the Air Force and the Army. Navy is in a strong position, having its own air force and a sizable "army." The Marines, who narrowly escaped total annihilation some years ago, now numbers some 190,000, with their own air power, assault weapons, and all the paraphernalia of modern warfare. The Navy, besides its giant carriers, which are in effect mobile air bases for Navy planes armed with atomic bombs, has entered the field of the ICBM with its Polaris missile. The Polaris, which is designed to be launched from a submerged submarine, can carry a nuclear warhead to a range of over 2800 miles. A fleet of forty-one Polaris armed submarines is budgeted for, each carrying sixteen of these weapons. A number of these submarines are already deployed throughout the oceans. Although the ultimate purpose of the Air Force's land-based equipment and the carrier-based atomic bomber and the Polaris are the same, the Navy would fight bitterly to prevent any attempts to amalgamate these forces with Strategic Air Command.

While agreeing with the Army that massive retaliation has distinct limitations and that flexible response is necessary to deal with any limited war situation which may arise, the Navy is not necessarily in agreement with the Army as to the best solution of the problem. With their powerful and diversified forces, ranking Navy and Marine Corps officers are inclined to feel that any limited war could be taken care of swiftly and efficiently, without any need for large Army forces.

All this is not to infer that the inter-service bickerings and squabblings are the result of mere power plays and the desire for aggrandizement of one particular service at the expense of the others. Certainly inter-service rivalries and jealousies exist, but the quarrels over strategic policies are the honest differences springing from deep convictions of intelligent, patriotic, and dedicated men, whose only real interest are the best interest of the country.

Now all three services are feeling the impact of civilian control to an extent never before dreamed of. For one thing, the statement of Clausewitz that war is merely an extension of politics is truer than ever today. This in turn has brought about more political control. And the more violent and devastating the weapons put in the hands of the military by science, the more carefully the civilian leaders of the country will exercise that control.

One factor which has entered into the realm of high strategy in the last few years is world opinion. At the moment, this works against us—as being by tradition and moral upbringing a humanist power, we are deterred, by fear of offending this opinion, from acting in some instances with the ruthlessness and disregard of human lives and rights which might have characterized our national policy of a few decades ago. Our adversaries, on the other hand, are not handicapped by any such scruples, and are free to develop the situation, political or military, as they see fit, and as the occasion demands.

More of a threat to the hitherto unchallenged role of the military chiefs has been the intrusion in recent years of a new type of civilian "adviser." These men, young for the most part, and all of them undeniably brilliant, have caused considerable furor in the Defense Department. Applying blackboard logic and computer machines the "whiz kids" have attempted to submit warfare and strategy to "dispassionate, cold analysis"-to quote one of them. The same bright young man's prediction that some people would inevitably resent this same "cold analysis" has turned out to be a miracle of understatement. High-ranking military men do not take kindly to being "advised" in matters pertaining to their own specialized fields by civilians young enough to be their sons, and loud howls of protest have been heard from generals and admirals alike. No less controversial is the present Secretary of Defense, himself a one-man brain trust.

The New Look

As the President's chief strategic adviser, the Secretary of Defense plays a vital role in the planning and operation of the nation's defense structure. Startling changes have been made since Robert S. McNamara came to power, but under his regime the tide has swung back to some extent in favor of the non-nuclear forces. For it now seems to be fully realized that the United States must be prepared to fight its war on many fronts and at several levels. The nuclear forces capable of "counterforce," which is the current name for massive retaliation, are now co-existent with balanced forces. These balanced forces, which may include short range, low-yield atomic weapons must be either deployed abroad in a constant state of readiness, or be able to move from their bases in the United States by ship or air at a few hours' notice.

With the nuclear forces of the two powers more or less counteracting each other - and as both sides "dig in"-hardening their missile sites and dispersing or concealing their launching apparatus - the emphasis will increasingly shift to "border" wars, fought on the fringes of the two great systems. Here in the territories of those unfortunate peoples who lie exposed and helpless between the opposing forces-the marches of feudal times - the battles will be fought. Thrust will be met with counterthrust - a revolution sparked in one hemisphere will be answered by a counterrevolution in the other. Speed and mobility will be at a premium. We must have the ability to deploy not a handful to fight a rear-guard action, with its attendant loss of prestige, but a force in strength, with overwhelming fire-power, fully equipped for the mission and with equipment built or adapted specifically for the type of terrain and climatic conditions to be met. Because of the distances involved, the lack of road or rail facilities, the difficulties of the terrain, and the time factor involved, in most cases the transportation of troops and equipment will be by air. Helicopters, fast, armed, and armored, and supported by vertical take-off craft (under development at the moment) will do much of the work. Already light carriers have been converted to carry thirty or more helicopters and Marine assault teams of some two thousand men. Vertical assault far from the support of heavy naval weapons calls for vastly increased air support. Direction of this close support will call for improved communication devices in which miniaturization can be expected to play a major part.

New infantry weapons have increased the firepower and the mobility of the U.S. fighting man. The standard infantry weapon is now the M-14—about a pound lighter than the M-1—and firing the 7.62-mm NATO cartridge held in a 20-round magazine. The rifle is capable of semi-automatic or fully automatic fire, and in the latter case, fitted with a bipod, the weapon functions as the squad automatic rifle.

A newer and lighter rifle—the AR 15—has been adopted by the Air Force, and 85,000 are being purchased by the Army. It weighs only 7.4 lbs. with loaded magazine and fires a 5.56-mm (.223-inch) 55 grain, projectile, with a muzzle velocity of 3250 f.p.s. It has seen service in Vietnam where it has acquired a reputation as an efficient killer.

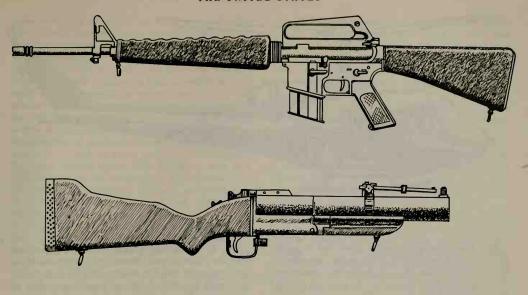
The 40-mm grenade launcher, M79, is a weapon designed to fill the gap between the hand grenade and the 60-mm mortar. The M79 is shoulder-fired, capable of throwing a high-explosive fragmentation projectile to a distance of some 400 meters. The cartridge is 3.9 inches long, has a casualty radius of five meters and weighs 8 ozs. At a range up to 150 meters the weapon can deliver pin-point fire on bunker-apertures, or foxholes.

There are several recoilless rifles in use, and a variety of wire-guided anti-tank missiles. One under advance development is TOW (tube-launched, optically tracked, wire-command link guided missile). This is electronically "slaved" to follow the gunner's line of sight. As long as the cross hairs of telescopic sight are kept lined up with the target (which may be moving) the course corrections are "wired" to the projectile.

The M102 light-weight 105-mm howitzer weighs 40 per cent less and shoots 35 per cent farther than the old model, and has the added advantage of 360 degree traverse. The M102 weighs only 3060 pounds and can be carried in the Caribou airplane and the Chinook helicopter, or sling-lifted under smaller models.

New weapons carriers and armored personnel carriers have been developed and special attention is being paid to the amphibious qualities of the new machines. Vertical assault is now an accepted and commonplace means of bringing troops into action and it is probably that in the near future VTOL (vertical take-off and landing) aircraft will supplant the slower and more vulnerable helicopters.

The field of weaponry is so complex, and, due to new developments in all branches of scientific endeavor, is changing so rapidly, that no complete evaluation is possible. The trend is always toward lighter



Colt AR 15 (military designation M16) and 40-mm grenade launcher, M79

weapons and vehicles (increased use of aluminum is making possible to airlift sizable equipment, such as the aluminum-armor plated General Sheridan assault vehicle); higher rates of fire, and greater reliance on guided missiles such as Shillelagh and Redeye. At the same time, standard ammunition, both mortar and rifled artillery, has been improved by the use of pearlitic malleable iron shells (giving better fragmentation), larger bursting charges, and more propellant. So great has been this improvement that the 105-mm round new approximates in range, accuracy, and killing-power the 155-mm of World War II and Korea.

Along with the great advances in arms and equipment, there have been drastic changes in the organization of combat units. The standard infantry organization at the moment is the ROAD (Reorganization Objective Army Division), designed to give flexibility and to allow the efficient grouping of brigade-sized units for particular missions. The ROAD infantry division consists of 974 officers, 132 warrant officers, and 14,488 enlisted men. The combat maneuver elements of the division consist of eight infantry battalions and two tanks battalions. There are three brigade headquarters within the division, to which the battalions and supporting elements are assigned in varying combinations to meet different contingencies.

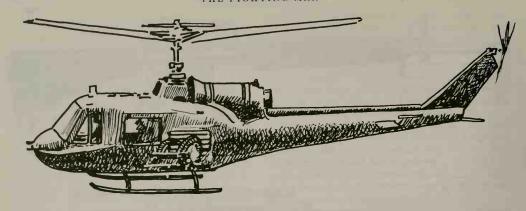
These supporting elements include divisional artillery, an armored cavalry squadron, an aviation battalion (97 helicopters and four fixed-wing airplanes) a signal battalion, an engineer battalion, a support command, and an MP company.

Once the mission is accomplished, the combat battalions revert to control by division, leaving the brigade headquarters without command until assignment of the next mission.

The infantry battalion is composed of three rifle companies and one HQ company, thirty-seven officers, two WOs, and 791 enlisted men. Each rifle company has four officers and 174 enlisted men, and includes, besides riflemen, eighteen grenadiers (armed with the M79), eighteen automatic riflemen, six machine guns, six 81-mm mortars, six 90-mm recoilless rifles and two 106-mm recoilless rifles.

A new air assault division, now undergoing evaluation has 15.954 personnel and 459 aircraft—only thirty of which are fixed-wing machines. The large helicopters of the division such as the Chinook, which can carry three tons internally, are capable of airlifting an entire infantry brigade.

But no arsenal of weapons, however new and deadly, is of any value without the will to use them—and it is the American fighting man of today and tomorrow who is our chief concern.



The Army's basic training is short, but thorough. At the time of writing it is being made more efficient by the introduction of Drill Sergeants, counterpart of the Marines' Drill Instructors. Accent is on physical fitness and proficiency with small arms.

More important, the recruit is introduced to discipline (often for the first time in his life) and is given to understand (also for the first time) that he is a definite part of a vast community—an honorable fellowship of the nation's best. He will learn that this society has its own way of measuring men's worth and that he turns in the customs and values of civilian life along with his civilian clothes. He will also learn that on this great team each man plays a small, but often vital part—and that the individual player is expendable.

In an Army of close to a million—divided into a myriad new and ever-changing units and organizations, equipped with increasingly diverse and complicated armament, and run on strictly business lines with the help of computers and efficiency experts—it is easy to lose sight of the human element, and to underestimate the importance of the military unit in its effect on morale.

In this country today, there is but little left of the old regimental tradition which once existed, and which still gives many European units their vital esprit de corps. CARS (Combat Arms Regimental System) is an attempt to give a feeling of historical association to newly formed organizations by attaching them, in name, to America's most famous regiments. These would thus be perpetuated, although the regiment may no longer exist as a tactical and administrative unit.

This, in my humble opinion, is too tenuous a link with the historical past. More to the point would be some system in which a soldier, after his basic training, would be attached (by assignment or choice) to a regiment. This regiment, which could be of indeterminate size, and would in no sense be a tactical organization, would have a permanent location, and there the recruit would finish his training and be indoctrinated in regimental history and tradition. The regiment, to which would be attached battalions of National Guard, would thus be the soldier's spiritual as well as temporal home. From it, companies and battalions would be detached to the divisional or task-force groupings currently in vogue. Replacements for these units would come from the parent regiment, which would, in time of war, be expanded by forming drafted men into additional battalions, stiffened by the transfer of officers and men from the regular battalions and from the affiliated Guard units. This would follow the British system which has worked so well for so long. John Masters, soldier-author, wrote in his Bugles and a Tiger:

"It may now come as a surprise to you to learn that this regiment of which we thought so highly did not actually exist. In the King's (or Queen's) infantry a regiment is not an organization that can be numbered and put on parade. It is not a tangible thing at all, but an ethereal idea. It has a page or two in the Army List, a roll of battle honors, a prescribed uniform and facings, and a home station or depot. That is all. In my time several regiments of the Indian and British Armies were indeed nothing more than that. Their battalions had been disbanded for various reasons, usually economy, but the essentials of the

spirit were kept on record and could at any time be clothed with flesh by raising new battalions."

British regiments usually consisted of two battalions, each commanded by a lieutenant colonel. They were not connected by any system of command, and seldom campaigned together. In time of war there were many battalions serving on many fronts - but all accorded the same regimental privileges and honors as the 1st Battalion (if not quite the same standing within the regiment) the same colors and the same eccentricities of uniforms, if any. The usual British system is, or was, to group battalions into brigades. To quote Masters again: "The brigadiers who thus had the honor of our services from time to time were the military seniors of our COs and could order us to do whatever they wished - but they could not interfere with our customs or traditions. The 4th Gurkhas might have had a custom of standing on their heads whenever the name of the Viceroy was mentioned, and a brigadier might not like it, but he could do nothing about it."

Such a system—and the size of a battalion could be varied—combines flexibility with the rigidity of regimental custom and tradition and has much to recommend it.

Without doubt a workable scheme could be arrived at which would give each soldier a permanent home unit (although he might seldom see his barrack square) and the pride and esprit which goes with belonging to a corps with a long and distinguished past.

Whatever methods are used to promote esprit and raise morale, one thing is certain: the Regular must be so conditioned that he will unhesitatingly accept any situation in which the twists and turns of our national policy may place him. He is the instrument by which that policy is implemented. He must be made to feel that when he enters the service he is there for one purpose and one purpose only - to become a part of a smooth-functioning, deadly, fighting machine. He may, and possibly will, be called upon to fight in small but vicious wars in various strange and uncomfortable parts of the world; against people - black, brown, yellow, or white - with whom he has not the slightest quarrel. If at X hours he is informed that at Y plus 40 he will be ready to be flown or shipped to battle the Watusi or the Samoyedes, or the Ruritanians, his only concern should be for his equipment and the technical details relevant to his mission. The rights and wrongs of the matter are no concern of his.

"Causes" are for the citizen-soldier, not for him. Long gone are the days when America stood isolated —and beloved—the hope and goal of all the world. A large part of the globe now views us with fear and/or alarm, while at least half of its inhabitants hate our guts. The rewards for our attempts to bring our brand of civilization to the unenlightened are brickbats, Molotov cocktails, and screams of "Yankee, go home."

For we are in the game of Weltpolitik, and it is a rough and dirty game—and one played for keeps. The players on our side must be as physically tough, as skilled in arms, and as dedicated to their soldierly duties as it is possible for training and indoctrination to make them. The American fighting man must at all costs be made into as close a replica of the professional legionary of old as the differences in time and culture permit.

To raise and maintain such a force in a society such as ours is no easy task. The right to dissent, to disagree publicly and loudly with the policies of the republic is one of the privileges of the American way of life which it is the armed services primary duty to defend. Yet it is sometimes difficult for a young American to know where his true allegiance lies, when he sees crowds of his contemporaries shuffling along bearing signs reading "Get out of Vietnam" and "Stop our war of aggression." He may be even more puzzled by the fact that these beatnick-bearded, callow critics of our foreign policy and their dirty-footed doxies are aided and abetted by teachers and professors—men who should know better.

These are boom times, and although Congress has recently voted substantial increases in the pay of offieers and enlisted men alike, the day has not yet eome when most servicemen can command a salary comparable to what they might earn in civilian life. Not until this gap is bridged can the country be assured of an adequate supply of men willing to enlist on a long-term basis. Until such a time the services will be faced with a constant drain into civilian life of the very types of alert intelligent men so desperately needed in the increasingly complex business of preparing for and waging war. As things stand now, the Services are running the most expensive trade schools in the world-and daily being forced to watch their more brilliant students hasten off to better paid jobs in industry the moment their enlistments are up.

Yet the present war in Vietnam (and it will undoubtedly prove to be only one of a number of such wars which we shall be forced to wage in our role of Communism's chief opponent) has pointed up as never before the value of the trained, professional soldier. And for all our increasingly affluent society,

where the civilian worker yearly draws more pay for doing less and less, it is still possible to find Americans willing to follow the trade of arms. Tough, dedicated men these, who take their soldiering seriously and who are willing to accept physical hardship and daily risk of life and limb to see a job through. Unlike the general run of short-term volunteer or draftee – many of whom freely admit that they cannot wait until the day they set foot in the States again, their Army days over – these men find nothing strange in making the service a career. And it is these career soldiers, officers, and NCOs whether acting as advisers to our

Allies or serving in the normal way in our regular units who are the backbone of the whole Vietnamese operation.

But if we cannot raise sufficient men to fill these legions from among our own, then we shall be forced to recruit them from other sources—hire them from Nationalist China or Abyssinia or wherever good fighting material may still be had. Long ago another great Empire came to this, and for much the same reason. And much as we may admire the fighting men of that Empire, we should be warned by her ultimate, and inevitable fate.

CONCLUSION

s THIS book has shown, there is no scientific way of assessing the worth of the fighting man of one nation over those of others. For courage, that most vital element of the combat soldier, we have seen to be a sometime thing - an expendable commodity common to most men, but, like a storage battery, able to be drained away by continuous use.

Also, like a battery, it can be recharged.

Next to courage - and so linked with it that it is hard to say where one leaves off and the other begins - is morale. It, too, is nebulous, depending on many factors, from Eagles or divisional shoulder patches to effective weapons; an efficient medical corps to a just system of rotation or a well-filled mailbag. It also is too changeable and human to be pinned down in a cut and dried formula. But in the makeup of the fighting man, morale, like courage, is supported and complemented by other adjuncts and these other aids, although in themselves unknown quantities, may perhaps be given arbitrary values and fitted into an equation of sorts. Thus troops with a fanatical devotion to their cause (say+4), intensive weapons training (+3), plus great physical hardiness (+2), but with poor leadership at the company level (-2.5), might prove inferior to others with little motivation but excellent discipline (+4), marked superiority in mechanization (+2), complete control of the air (+3.5) but with poor training and acclimatization for the particular theater in question (-2.5).

On the other hand, these values are constantly changing. The tough, naturally hardy troops may become weaker through a breakdown of supply or poor health discipline; the superior mechanization of the others may be offset by impractical terrain. The experienced commander must always have these changing values in mind and on his analysis of the fighting value of his divisions may rest the outcome of his

Of vital importance is the mental attitude of an army. In this day of widespread news coverage and comparatively (this applies only to the democracies) free distribution of news, it is impossible for troops not to be influenced to some degree by the picture of the enemy as delineated by the nation's press as well as by "scuttlebutt" among the troops themselves. This usually veers from gross underestimation at the beginning of a war to an exaggerated opinion of a successful foe's prowess. Thus, for example, was built up early in World War II, the myth of the Japanese soldier as a myopic runt, ill-equipped and poorly led - to be later supplanted by an equally false impression of the Japanese as a super-man-king of the jungles and lord of the sea and air. Such pictures are hard to erase - and it took bitter fighting by American and Imperial troops to dispel the aura of invincibility which rumor and imagination had bestowed on the fighting men of Nippon.

One example of how effectively this myth was dispelled was the long-drawn-out campaign in Burma and Malaya. In 1942 the Japanese, by cutting wheeled transport to a minimum, taking full advantage of the jungle and using infiltration and encircling tactics, took Malaya and unceremoniously hustled the Allies out of Burma. Yet later in the war, the Imperial troops, many of them native - Indians, Gurkhas, Africans, and others - by using the hitherto unfriendly jungle to conceal their own enveloping movements smashed the enemy back down the peninsula and at the last were inflicting losses at the rate of more than 100 to 1.

Another mental hazard is that of the successful enemy general - built up by press and army gossip to the stature of a giant - unbeaten and unbeatable. This reaction is understandable - a way, perhaps unconscious, of explaining defeat - but one which can have serious results.

Such a one was Field Marshal Erwin Rommel. The British Eighth Army, until after Alamein, suffered from a "Rommel complex." Perhaps a parallel can be drawn between the Eighth Army and the Army of the Potomac of Civil War days. Both were composed for the most part of veterans, whose discipline and morale was strong enough to offset poor leadership and numerous defeats. The Army of the Potomae had its "Lee complex" but, like the Eighth, finally went on to ultimate victory under the command of a strong and determined general.

Another myth has been dispelled on the battlefields of recent years, that of white supremacy. This fable arose from the dire results of non-white ignorance, lack of training and discipline, and insufficiency or non-existence of war material. The Japanese, Koreans, Chinese, and more recently the Vietnamese have proved that, properly equipped and led, the Asiatic at least, is a soldier second to none.

To recapitulate, the ideal soldier, "bloody, bold, and resolute," must have, beside guts and aggressiveness:

Training – both general and specific – tough, thorough, and realistic.

Discipline in all its forms-battle, march, health, etc.

Efficient weapons and equipment. Physical and mental stamina.

Intelligence.

All these attributes in themselves contribute to high morale, but this can be further bolstered by:

Good leadership - from NCOs to generals (a must, if battles are to be won).

Professional pride, and/or a cause (religious, political, social, or economic).

Identification with a unit – aided by regimental tradition, distinctive uniforms or equipment, badges, etc.

An efficient supply system, able to deliver ammunition, food, and equipment when and where needed.

An efficient medical service.

Recognition of services - press coverage, medals, unit citations, special privileges, etc.

Periodic rest from combat and a reasonable rotation program.

An adequate rate of pay – pensions, family benefits, etc.

Prompt replacement of casualties.

The fighting man who possesses most of the qualifications listed above will be a good soldier. The one who has them all will be a damn good soldier. And the men (provided there are enough of them) who have them all, plus the munitions, the factories, the ships, and the planes, will sweep the earth.

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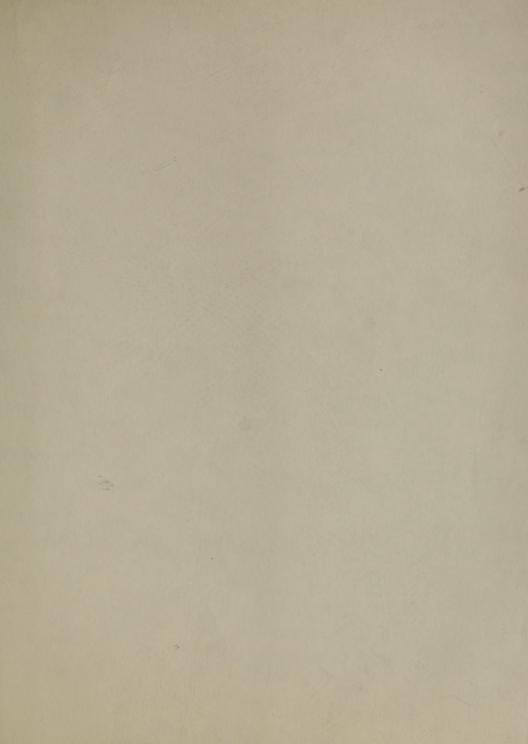
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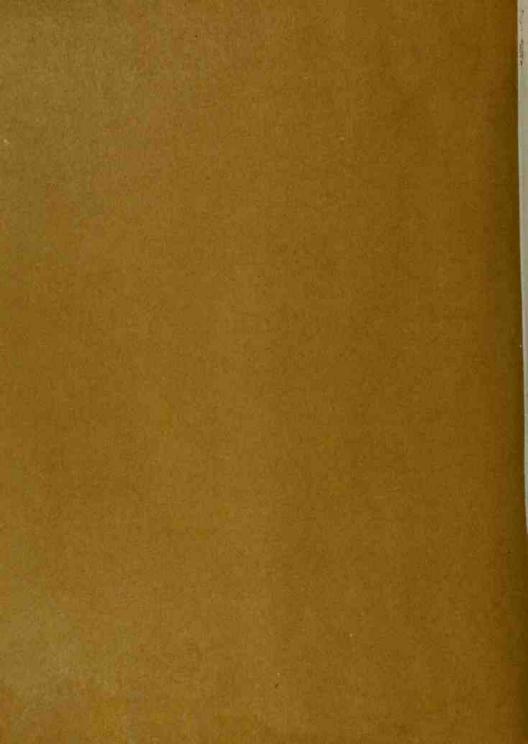
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